

California GARDEN

MARCH-APRIL, 1989

One Dollar

Volume 80 No. 2

ISSN 0008-1116

R



Orchids

Dendrobium, nobile

dwg. by Babbette Edlesta



42nd ANNUAL ORCHID SHOW

“Parade of Orchids”

**PRESENTED BY
SAN DIEGO COUNTY
ORCHID SOCIETY**

March 18, 19 & 20, 1989

PLANT SALES

**SCOTTISH RITE MEMORIAL
1895 CAMINO DEL RIO SOUTH
SAN DIEGO, CA 92108**

(South Side of Hwy. 8 Between Mission Center Rd. and Texas St. Across from May Co.)

Friday March 18 Show Preview 6 PM to 10 PM

Saturday March 19 9 AM to 9 PM

Sunday March 20 9 AM to 5 PM

FOR QUESTIONS CALL OR WRITE:

SHOW DIRECTOR
ROBERT HODGES
1602 SVEA COURT
LEMON GROVE, CA 92045
(619) 461-4915





Published by
San Diego Floral Association
for 80 Years

PUBLICATION STAFF

EDITOR

Elizabeth B. Glover

EDITOR EMERITUS

Althea Macdonald

ASSOCIATE EDITOR

Dr. Donald Boyer

Grace Boyer

Skipper Cope

Bill Gunther

Barbara Jones

PRODUCTION EDITOR

Pat Ziebarth

CONSULTANTS

Dr. Geoffrey Levin

Dr. William Nelson

Dr. Donald P. Watson

STAFF WRITERS

Penny Bunker

Mary Lou Orphe

Harry Tolen

Alison Voss

Tineke Wilders

COORDINATORS

Advertising — Jo Ann Gould

Circulation — Roy Jones

SALES REP

Dr. Donald Boyer 442-4242

PRINTED BY:

Neyenesch Printers, Inc.

2750 Kettner Blvd.

San Diego, CA 92101

Manuscripts are invited. Deadline is 90-days prior to publication date. All manuscripts and illustrations submitted will be handled carefully but we cannot assume responsibility for their safety. All submissions must be double spaced and accompanied by return postage, if you expect them to be returned to you. Hortus Third is the authority for all botanical names used in this magazine. All opinions expressed are those of the authors and do not necessarily reflect the views of the editors of the California Garden.

Address all editorial material to:

CALIFORNIA GARDEN

San Diego Floral Association

Casa del Prado, Balboa Park

San Diego, CA 92101-1619

Postmaster, Send change of address to:
CALIFORNIA GARDEN, Casa del Prado
Balboa Park, San Diego, CA 92101-1619

California GARDEN

SINCE 1909

LIBRARY OF CONGRESS NO. ISSN 0008-1116

San Diego Floral Association &
Garden Center

Casa del Prado, Balboa Park
San Diego, CA 92101-1619
Monday through Friday
10 a.m. to 12 and 1 to 3 p.m.
(619) 232-5762

VOLUME 80

MARCH-APRIL 1989

NUMBER 2

- 36 HORTICULTURE CALENDAR
40 GROWING ORCHIDS — PART TWO Harry Tolen
43 PICKING A GARDEN HOSE Pop Larsen
44 HIBISCUS IS SUBJECT OF QUAIL BOTANICAL GARDENS POSTER
45 ANGEL-WING BEGONIAS Gilbert A. Voss F.R.H.S.
46 THE BETEL NUT PALM Robert D. Horwitz
47 'PRO-GRO' INJECTOR, FERTILIZER Bill Gunther
47 SPROUTS Marilyn Myers
48 AUTOMATIC IRRIGATION SYSTEMS REQUIRE MANAGEMENT
48 WHERE DO TOPIARIES COME FROM? Eleanor Macy
49 THE ORIGIN AND DEVELOPMENT OF BOTANICAL GARDENS
50 THE ORIGIN AND DEVELOPMENT OF BOTANICAL GARDENS
50 THE ORIGIN AND DEVELOPMENT OF BOTANICAL GARDENS
55 ELECTRONIC NEWS SERVICE Thomas W. Whitaker
55 REMEMBRANCES OF THINGS PAST University of California
56 BOOK REVIEWS Spencer C. Church & Dr. Don Boyer
56 BOOK REVIEWS Mary Lou Orph] y and Harry Tolen
57 JELLY PALM Ruby Law
58 NOW IS THE TIME Compiled by Penny Bunker
61 PASSION VINE FLOWER PARTS ARE SYMBOLIC Melba Davis
62 OFFICER AND AFFILIATE LISTING

FRONT COVER ILLUSTRATION BY BABETTE EDDLESTON

Babette Eddleston, our cover artist this month, lived in southern California from 1964-1986 where she first became interested in sketching and drawing flowers. She has taught and lectured at UCLA, Beverly Hills Adult School, Yosemite and South Coast Botanical Garden. She presently lives in Shrewsbury, NJ and can be contacted by writing to her at P.O. Box 8433, Red Bank, NJ 07701.

SAN DIEGO FLORAL ASSOCIATION SPONSORS spring classes from 9:30 a.m. to 2:30 p.m. as follows:

1. Basic Flower Arranging
Feb. 14, 21, 28 — Martha Rosenberg, Instructor
Apr. 4 — JoAnn Gould, Instructor
Apr. 11, 25 — Velma West, Instructor

Materials needed include flowers, vases, clippers, and mechanics. Classes limited. Cost is \$25 for three lessons.

2. Basketry Class
March 10 and April 18 — Martha Rosenberg, Instructor.
Cost depends on type of basket and materials used.

Coffee supplied for all classes. Bring your sack lunch. Your check is your reservation. Call Marie Walsh 298-5182 for registration and information.

This year's 62nd annual Spring Rose Show sponsored by the San Diego Rose Society, "A Bicentennial Celebration With Roses: Waving the Red, White and Blue" will be open on April 8 from 2-6 p.m. and April 9 from 10-5 p.m. in Balboa Park Club at Balboa Park. Donations at the door are \$1.50 for adults, \$1.00 for seniors, and free for children under 16. There will be guest speakers, and a sale of cut blooms at moderate prices. Info: 483-3584 or 579-2238.

Each year in the July/August issue of California Garden, we publish a free listing of garden clubs which are not affiliated with San Diego Floral Association. If you want your garden club to be listed free in that issue, submit the name of club, name, address and telephone number of the president of the club, and time, day of month, and meeting place, no later than May 10, 1989 to California Garden.

CALIFORNIA GARDEN (ISSN 0008-1116) (USPS 084-020), a non-profit publication, is published bi-monthly for \$5.00 per year, or \$9.00 for two years, by San Diego Floral Association, Inc., Casa del Prado, Balboa Park, San Diego, CA 92101-1619, USA. Single copy is \$1.00. For foreign countries add \$3.00 for extra postage. Entered as second-class matter, December 8, 1910 at the Post Office in San Diego, California, under the Act of March 3, 1879. Second class postage paid at San Diego.

HORTICULTURE CALENDAR

**San Diego Floral Association Event*

***CONTEMPORARY FLOWER ARRANGING CLASSES AND BASKETRY CLASSES** sponsored by San Diego Floral Association are being scheduled this year. Call Marie Walsh, (619) 292-5182 to get on her mailing list for schedules, if interested in attending. Dates are listed on page 35.

***FREE FLORAL CRAFTS INSTRUCTION WORKSHOP** each Thursday 10-2 p.m. in San Diego Floral Library, Room 105, Casa del Prado, Balboa Park. If you are creative, and wish to participate, come each Thursday to Floral Office. Info: 232-5762.

OFFSHOOTOURS SPONSORS FREE plant walk of Balboa Park each Saturday. Meet at 10 a.m. in front of Botanical Lath House by the lily pond. No reservations required. Topics include: 1st Sat: Heart of the Park; 2nd Sat: Palm Walk; 3rd Sat: Tree Walk; 4th Sat: Desert Walk; 5th Sat: repeat Heart of the Park.

OFFSHOOTOURS SPONSORS FREE 2-hour walking botanical tour of the Zoo the last Sunday of each month beginning at 9:30 a.m. Free with paid admission or zoo membership. Reservations required in advance as space is limited to 25 people. Call Dale Ward at (619) 297-0289.

February 18

Orchid and Specialty Plant Sale. Third annual sale benefits the Los Angeles State and County Arboretum and the California Arboretum Foundation. Sale will feature more than 1,000 exotic plants and orchids including unusual orchids, fruit trees and palms sold at bargain prices. A new type of cordyline called "Kiwi" that has tricolored foliage and improved resistance to mites will be available. Blooming orchids, aromatic ginger, hibiscus, and lobster claw flowers (heliconias) will be for sale. Los Angeles State and County Arboretum, Arcadia. 9-4 p.m.

February 18-19

San Diego County Orchid Society's Mini-show and Sale. Room 101, Casa del Prado, Balboa Park, San Diego. Sat: noon-4:30 p.m.; Sun: 10-4:30 p.m. Free.

February 19

Ground Covers. Expert Horticulturist from the Palos Verdes Begonia Farm, Eleanor Barker will discuss the many alternatives to turf. Slides will illustrate different uses of vines, shrubs, water thrifty plants, and herbaceous plants as ground covers. South Coast Botanic Garden, Palos Verdes Peninsula. 2 p.m.

February 21

***San Diego Floral Association Dinner and Meeting.** Room 101, Casa del Prado, Balboa Park. 5:30 social hour; 6:00 p.m. pot luck; 7:30 Irina Gronberg, artist, teacher, and master gardener, will bring some of her art, and talk about art and her garden. Reservations not required. Bring a dish and enjoy the evening.

February 24-26

International Symposium on Bulbous and Cormous Plants sponsored by The American Plant Life

Society and University of California at Irvine Arboretum. This will be a 2½ day symposium devoted to the botany, culture, and hybridization of bulbous and cormous plants. It will be held in Irvine. For registration information write to: Prof. Harold Koopowitz - ISBC, UCI Arboretum, University of California, Irvine 92717.

February 25-26

Camellia Show. Admire more than 2,500 camellias. More than 40 categories of camellias such as reticulatas, non-reticulatas and japonicas in a variety of sizes can be seen. Questions on camellia care will be answered. Descanso Garden, La Canada Flintridge. Sat: 1-4:30 p.m.; Sun: 9-4:30 p.m.

February 25-26

African Violet Show. The South Coast African Violet Society will present "Violets in Concert" with roughly 140 African Violets on display. Members will answer questions and give demonstrations on care throughout the day. African violets, pots, and other material will be sold. South Coast Botanic Garden, Palos Verdes Peninsula. Sat: 11-4 p.m.; Sun: 9-4 p.m.

February 26

Mushroom Fair. The Los Angeles Mycological Association encourages show visitors to bring in their mushrooms for identification as poisonous or edible. Clay models and dioramas will show the natural habitat of more than 150 species of mushrooms. Members will answer questions, show slides, and give cooking demonstrations. Books and T-shirts will be for sale. Los Angeles State and County Arboretum, Arcadia. 10-4 p.m.

March 4-5

San Diego Daytime African Violet Society's 8th Annual Show and Sale, Room 101, Casa del Prado, Balboa Park. Sat: 1-5 p.m.; Sun: 10-4 p.m. Free.

March 4, 5

Daffodil Show sponsored by the Southern California Daffodil Society. Members will answer questions on daffodil care. Descanso Gardens, La Canada Flintridge Sat 1:30-4 p.m.; Sun: 10-4 p.m.

March 5

Sun and Shade Gardens. Evelyn Weidner, owner of Weidner's Begonias of Encinitas will share her expertise in selection of appropriate plants for sunny and shady areas. Demonstrations on planting techniques. Plant sale. South Coast Botanic Garden, Palos Verdes Peninsula 2 p.m.

March 5

Palomar District of California Garden Clubs, Inc. Annual Fund Raiser: Wine and Tea Party and a Gala Art Auction, Soledad Club, 5050 Soledad Road, San Diego, CA 92109. 2 p.m. Information: (619) 748-6324.

March 8-9

Green Show '89, the only annual industry-wide trade show for the entire San Diego area will double its space for the 1989 show in the Bing Crosby Hall and the Pat O'Brien pavilion at the Del Mar Fairgrounds. Vendor spaces available.

Del Mar Fairgrounds. Vendor spaces available. Contact Jan Tubiolo, Coordinator, Cuyamaca College, 2950 Jamacha Road, El Cajon, CA 92019. (619) 670-3544. Hosted by the Cuyamaca College Botanical Society.

March 10

Tour to focus on Los Angeles Gardens: From Bel Air to Malibu Lagoon sponsored by the Santa Barbara Botanic Garden. Departs the Santa Barbara Botanic Garden at 7:30 a.m. returning about 6:30 p.m. that evening. Fee \$70 (Santa Barbara Botanic Garden members \$60) includes transportation, admission to private gardens, lunch, and refreshments during the day. Includes morning walk through Hannah Carter Japanese Garden in Bel Air, Luncheon at Virginia Robinson Gardens in Beverly Hills, inside look at private home, studio and garden of Nancy Goslee Power, and viewing of the Adamson House and Garden at the Malibu Lagoon Museum. Reservations call the Botanic Garden at (805) 563-2521.

March 11

Ninth Annual Environmental Education Fair with more than 65 natural science exhibitors. Teachers who arrive early can sign up for 10 a.m. workshop that offers innovative ideas and projects for the classroom. Throughout the day people of all ages can participate in hands-on projects and nature games. Free walking tours of the Arboretum will be narrated by docents. 9-4 p.m. Los Angeles State and County Arboretum, Arcadia.

March 12

Camellia Slide Show by Glenn Burroughs, President of the South Coast Camellia Society. It will help explain the history of camellias, and show visitors the best camellias for southern California. Demonstrations on potting, repotting, and trimming will also be presented. South Coast Botanic Garden, Palos Verdes Peninsula 2 p.m.

March 12

Professional Women's Horticulture and Landscape Association's Show, Room 101, Casa del Prado, Balboa Park. Free.

March 17, 18, 19

San Diego County Orchid Society's 43rd Annual Orchid Show, "Orchids for all Seasons", at the Scottish Rite Memorial, 1895 Camino del Rio South, San Diego (South side of Hwy. 8 between Mission Center Rd. and Texas Street, across from May Co. in Mission Valley). Fri. Show Preview 6-10 p.m.; Sat: 9-9 p.m.; Sun: 9-5 p.m. Admission Charge. Plant Sales.

March 18

Spring Plant Sale to benefit Botanic Garden. Wide selection of native California and Mediterranean plants to be featured in the Garden Courtyard of Santa Barbara Botanic Garden at 1212 Mission Canyon Road, Santa Barbara. No admission fee, open to public. Botanic members receive a 10% discount on plants in one-gallon containers. Memberships available at entrance. In the event of rain, sale will be held the next day, on Sunday March 19. Info: (805) 563-2521.

March 18-19

San Diego Chapter of Ikebana International's Annual Spring Flower Show will feature more than fifty Japanese flower arrangements representing nine schools of design. Demonstrations each day at 1, 2, and 3 p.m. Hand painted silk articles will be on display. Casa del Prado Room 101, Balboa Park 11-4:30 p.m. Free. Info: (619) 224-1133.

March 18-19

Flower Show "Spring Beauty the Creative Way" will feature 3-dimensional flower arrangements designed by the Flower Arrangers Guild. More than 75 designs using grasses, succulents, and flowering plants will be used along with Japanese antiques and other art objects to create unique arrangements. Descanso Gardens La Canada Flintridge. 10-4:30 p.m.

March 19

Spring Vegetables. Sid Horton will talk about planting spring vegetables. Learn water saving techniques and how to avoid using pesticides. He will show visitors how to design "square foot" gardens to save time and water. Literature on water conservation will be available. South Coast Botanic Garden Palos Verdes Peninsula. 2 p.m.

March 19

Insect Fair sponsored by the Lorquin Entomological Society at Los Angeles State and County Arboretum, Arcadia. 10-4:30 p.m. More than 40 exhibitors will display living and preserved insects from California and other parts of the United States. Visitors can see common and exotic insects, tropical and local ones, and the largest and smallest insects. Demonstrations on how to use a microscope and how to mount insects. Books, specimens, collecting equipment, arts and crafts and t-shirts will be sold.

March 22

"An Eye for Beauty" Photographers' Seminar

sponsored by the Village Garden Club of La Jolla at Casa del Prado, Room 101, Balboa Park, San Diego. Mr. William T. Bode, award winning photographer from Sacramento, will share his 30 years of experience covering techniques of lighting, choosing proper photographic equipment and backgrounds. This is a seminar for floral designers who have wanted to capture the beauty of their arrangements forever. Admission includes luncheon donation. 10-2:30 p.m. Information: contact Jo Ann Gould, 2111 Rachael Ave., San Diego, CA 92139. (619) 475-8996.

March 24-April 16 (Fridays through Sundays only)

Alice Menard Gardens, a spring spectacular of bulbs, perennials, roses, shade gardens, and much more will be open to the public 10-3 p.m. Closed Monday through Thursday of this time period. Admission \$3.50. 13027 Maplevue Street, Lakeside CA (619) 443-2400.

March 25-26

Exotic Plant Society's 11th Annual Show, Room 101, Casa del Prado, Balboa Park, San Diego. 11-4:30 p.m. Free.

April 1-2

Balboa Park African Violet Society's 14th Annual Judged Show "Foolin' Around with Violets", Room

101, Casa del Prado, Balboa Park. Sat: 1-5 p.m.; Sun. 10-4 p.m. Featured will be large gorgeous violets, arrangements, dish gardens, and a yellow violet. Demonstrations and hands-on instruction available both days. No admission charge.

April 1-2

The Aril Society and Southern California Iris Society's Show will feature early blooming iris such as arils, bearded iris, and arilbreds in cut flowers and arrangements. Some plants will be sold. Los Angeles State and County Arboretum, Arcadia. Sat: 1-4:30 p.m.; Sun: 9-4:30.

April 1-9

Spring Garden Show "A Day in the Garden" at Descanso Gardens, La Canada Flintridge. 9-4 p.m. Landscape architects and designers will feature display gardens for southern California lifestyle. Inside Van de Kamp Hall commercial growers, garden clubs, and private individuals will display cuttings, plants, flowers and cut flowers. Plants grown by Descanso's plant propagation program will be for sale.

April 2

POT-ET-FLEUR. Elinor Keefe and members of the Judges Council of California will demonstrate Pot-et-Fleur. This style of floral arrangement uses two or more rooted plants accented by cut flowers to create a semi-permanent arrangement. Additional flower arrangements will also be featured. South Coast Botanic Garden, Palos Verdes Peninsula, 2 p.m.

April 7-May 4

Artist of the Month. More than 100 paintings by Dory Grade will be displayed in the Hospitality House at Descanso Gardens, La Canada, Flintridge. Landscapes and floral settings from Descanso Gardens, Denmark, England and Yosemite can be seen. Ms. Grade uses a variety of media including watercolors, oils, prints, and drawings. All artwork will be for sale. 9 a.m.-4 p.m.

April 8-9

Cactus and Succulent Show. More than 800 cacti and succulents from around the world will be displayed by the South Coast Cactus and Succulent Society. Rare plants including specimens, miniature and large cacti can be seen. Members will answer questions. More than 1,000 cacti and succulents and books on plants will be for sale. South Coast Botanic Garden, Palos Verdes Peninsula. Sat: noon-4:30 p.m. Sun: 9-4:30 p.m.

April 8-9

Bonsai Show. 10th Annual Show by the Shohin Bonsai Society of Southern California will display bonsai plants less than nine inches tall. Also displayed will be Japanese viewing stones called suiseki and creations of classic miniature trees. Bonsai trees, pots, and decomposed granite will be for sale. Demonstrations on the art of bonsai will be each day at 11 a.m. and 2 p.m. Los Angeles State and County Arboretum, Arcadia. Sat: 10-4:30 p.m.; Sun: 9-4:30 p.m.

April 8-9

San Diego Rose Society's 62nd Annual Show at Balboa Park Club, San Diego. Sat: 2-6 p.m.; Sun:

10-5:30 p.m. Admission charge.

April 9

39th Annual Convair Rose Show, Room 101, Casa del Prado, Balboa Park. Free.

*April 13

Bus Tour to Ensenada to visit their annual flower show. Optional luncheon with time for shopping and sightseeing. Info: Barbara Pruyne (619) 561-2436.

April 13-16

Lakeside Western Days, Lindo Lake Park, Lakeside CA. Continuous entertainment and amusements, live music, sporting events, arts/crafts and commercial exhibits, and annual parade on Saturday, April 15. Free admission. Booths available for arts/crafts and commercial exhibits. Info: contact Lakeside Chamber of Commerce, 9748 Los Coches, Suite 6, Lakeside, CA 92040. (619) 561-1031.

April 14-16

Spring/Home Garden Show sponsored by San Diego Home/Garden magazine at Del Mar Fairgrounds. Continuous seminars, including demonstrations on cooking, gardening, home design, and home improvement. April 14 & 15 10-9 p.m.; April 16 10-5 p.m. Admission charge.

April 15-16

Coronado Flower Association's 64th Annual Flower and Garden Show. Spreckels Park, Orange Avenue between 6th and 7th Streets, Coronado. Theme - "Anything Goes". April 15 1-5 p.m. Entertainment begins at 2 p.m. April 16 10-4 p.m. Entertainment begins 11 a.m. Presentation of trophies 3 p.m. Sale of cut flowers 4 p.m. Adults \$1.50; Children \$.25. Free to members. Also in the park: Coronado Art Association Art in the Park, Friends of the Library Book Fair, Refreshment stands, and Plant sale 8-5 p.m. Saturday.

April 15-16

Rancho Santa Fe Garden Club's Annual Flower Show and Plant Sale. The Rancho Santa Fe Garden Club will present "April in Paris" with artistic arrangements to suit the theme at the Garden Club at La Granada and Avenida Acacias, Rancho Santa Fe CA Sat: 1-5 p.m.; Sun: 10-5 p.m. It is open to the public and admission is free.

April 15-16

Ichijo School of Ikebana, San Diego Chapter will hold its flower show at Room 101, Casa del Prado, Balboa Park. 11-4:30 p.m. Free. Demonstrations each day at 1 and 2 p.m.

April 15-16

Amaryllis Show presented by the Southern California Hemerocallis and Amaryllis Society at Los Angeles State and County Arboretum, Arcadia. Sat: noon-4:30 p.m.; Sun: 10-4:30 p.m. The lily-like flowers can be seen in shades of reds, pink, white, salmon, orange, and sometimes yellow. Members will answer questions on amaryllis care.

April 15-16

Rose Show. The San Fernando Valley Rose Society will present "Roses Around the World", displayed arrangements and cut roses such as hybrid teas, floribundas, old fashioned and miniature roses.

Members will answer questions. More than 1,000 miniature roses, bouquet and cut roses for sale beginning at 9 a.m. each day. Van de Kamp Hall, Descanso Gardens, La Canada, Flintridge. Sat: 1-4:30 p.m.; Sun: 9-4:30 p.m. All amateur rose growers are invited to enter the show.

April 16

Flower Photography. Margaret Norwood, photographer for Point Vicente Interpretative Center in Rancho Palos Verdes, will present a slide show featuring plants from Europe, England, Canada and Hawaii. Tips on close-up photography, backgrounds, lens choice, and f-stop choice will be discussed. South Coast Botanic Garden, Palos Verdes Peninsula, 2 p.m.

April 22-23

San Diego Bonsai Club's 24th Show Room Room 101, Casa del Prado, Balboa Park. 11-5 p.m. Free.

April 22-23

Pacific Rose Society's 52nd Annual Rose Show in Ayers Hall at State and County Arboretum, 301 N. Baldwin Avenue, Arcadia. Sat: 1-4:30 p.m.; Sun: 9-4:30 p.m. The Rose show will include Hybrid Teas, Grandifloras, Floribundas, Miniatures, etc. All amateur rose growers are invited to enter. Cut roses, bouquets, and miniature rose plants will be available for purchase at 9 a.m. both days. Info: (818) 447-4513.

April 23

Epiphyllum Show. Single flowers, arrangements, and blooming plants of epiphyllum will be on display at the South Bay Epiphyllum Society show at South Coast Botanic Garden, Palos Verdes Peninsula. 10-4 p.m. A wide range of vibrantly colored epiphyllum, commonly called orchid-cactus, can be seen along with other cacti that make their homes in trees. Cuttings/rooted plants for sale.

April 29-30

San Diego Imperial County Iris Society's 24th Show Room 101 Casa del Prado, Balboa Park. Sat: 12:30-5; Sun: 11-5 p.m. Free.

April 29-30

Dos Valles Garden Club's 10th Standard Flower Show. "It Happens Every Spring" theme will be carried out in each division: design, youth exhibits, educational exhibits, and horticulture. Valley Center Community Church, 29105 Valley Center Road, Valley Center. Sat: 1-5 p.m.; Sun: 1-4 p.m. Public invited. Admission and parking free.

April 29-30

Bonsai Show. The Descanso Bonsai Society will present their first annual indoor show featuring selected bonsai trees, forest giants miniaturized to remain less than 48 inches tall, created by southern California bonsai masters. Deciduous trees, evergreen trees, grasses, and herbs will be displayed with viewing stones called suiseki. Descanso Gardens, La Canada Flintridge. 9-4:30 p.m.

April 30

Spring Concert in the Garden at South Coast Botanic Garden, Palos Verdes Peninsula, 2 p.m. The 50 member Palos Verdes Symphonic Band will play classical music under the direction of Richard Schwalbe.

April 30

Epiphyllum Show. The Epiphyllum Society of America's 30th Annual Flower Show will display more than 500 floral and hanging arrangements, trellises, and potted epiphyllum. Rooted epiphyllums and raw cuttings will be for sale from 9-4:30 p.m. Members will answer questions, and literature on care of epiphyllum will be available. Ayers Hall, Los Angeles State and County Arboretum, Arcadia. 9-4:30 p.m. Show hours 11-4:30 p.m.

May 2-8

Journey into Spring: Gardens of Philadelphia and the Brandywine Valley sponsored by the Santa Barbara Botanic Garden. Highlights include the Winterthur Museum, Longwood Gardens, Mt. Cuba Center, Morris Arboretum, Pennsylvania Horticultural Society grounds, and private country estates, plus sample Dutch cooking and enjoy an evening at the theatre in Bucks County. Reservations: call (805) 563-2521.

May 5-7

Hydroponic Society of America's 10th Annual Conference and Trade Show at Airport Holiday Inn, Tucson Arizona. Tour of Biosphere II, Bach's Cactus Nursery and the Environmental Research Labs at the University of Arizona. Many prominent speakers will speak on a variety of topics. Attendance open to general public. Info: Mr. Gene Brisbon, Executive Director, P.O. Box 6067, Concord CA 94524 (415) 682-4193.

May 6-7

Bromeliad Study Group of Balboa Park's Annual Show and Sale, Room 101 Casa del Prado, Balboa Park. Sat: 10-5 p.m.; Sun: 10-4 p.m. Proceeds from sale to be used for Bromeliad Garden at San Diego Zoo. Colorful varieties available for sale. Experts available to answer questions. Free.

May 7

Baldwin Bonanza. The 19th Annual Benefit Plant Sale sponsored by the California Arboretum Foundation in support of the Los Angeles State and County Arboretum offers a choice of thousands of plants at bargain prices, many not available in stores or nurseries. A wide variety of indoor plants, staghorn ferns, Chinese fringe trees, shrubs, vines, and Arboretum introductions will be for sale. Los Angeles State and County Arboretum, Arcadia. 9-4:30 p.m.

May 7

Quail Botanical Gardens Foundation's Annual Fun and Funds Festival at Quail Botanical Gardens, 230 Quail Gardens Drive, Encinitas from 10-4 p.m. On sale will be a wide assortment of plants, handcrafted items, jams, jellies, vinegars, and fancy breads. Free admission.

May 14

San Diego Epiphyllum Society's 19th Annual Mother's Day Show and Sale, theme "Sunday in the Garden". Casa del Prado Room 101, Balboa Park. 11-5 p.m. Free.

May 20-21

San Diego Geranium Society's 17th Annual Show and Sale Room 101, Casa del Prado, Balboa Park. Sale opens at 10 a.m. Show starts at noon - 5 p.m. Sun: 10-5 p.m. Free.

Growing Orchids (or anything) Outdoors In San Diego — Part Two

By Harry Tolen

The last article I wrote for this publication brought up a lot of questions from readers and some very good information from them too. Again, relative to their particular area, but worth trying where I am, maybe you also, I really am enjoying the feedback, and I think there is some value for us all in discussing the many ways San Diegans are coping with the frost. I will have to expand the area though, as I got mail from other areas in southern California. I would like more. A letter from you with your technique for surviving your outdoor plants through the frost would be appreciated, and shared.

So this second part is not just for orchids, but for all outdoor plants and the many ways you might help them through those cold times.

Any extra protection you can provide helps. My Mom and Dad always had a lath house. This was typically protection for top and sides, made of the small redwood lath spaced every other lath. They would grow ferns and begonias under this protection, but I can still remember the ritual every year. My Dad had a deal with the Chula Vista Park Department. They would save him all the palm tree limbs they cut, you know, the long feather ones. He would bring them home and pile them in the front yard. We then dragged them around to the back and strategically threw them up on top of the shade house. This was to make a more even shade and more dense shade. I would guess it took the shade level from 30 to 70 or 80 percent shade.

The palm fronds would weather over the year and break down, so the next year we would deposit more on the roof. All the plants did quite well under this protection. It helped soften the sun, and also helped avoid the frost. I don't remember too many plants in particular, but I remember staghorn ferns, maiden hair ferns, some begonias, some fuchsias, and lots and lots of baby tears moss. This was in 1941 and I wasn't really interested in the plants that much, being 9 years old at the time, but some of the most fun I used to have was going through that lath house and snatching each pot out of the baby tears moss, so our pet mallard duck could dive into the opening, and devour all the cutworms, snails, and sow bugs. That's the best snail deterrent I know of, one duck! Of course, the footing around the yard could get pretty slippery sometimes, but you have to weigh that against no snails, I guess.

Anyway, my parents did quite well in the lath house. Around the yard they had planted the more conventional frost resistant plants, and they left a lot of area to grow the annuals every year. I remember lots of roses, hedges of *Eugenia* bushes, geraniums (my grandmother loved geraniums), lots of sweet peas, and dahlias during the year, and the obligatory dwarf lemon tree, and lots of tomatoes.

I do remember it getting cold enough to affect the *Eugenia* hedges with a light burn, and even the new growth on the rose bushes would get hit once in a while. That's when the plants in the shade house suffered the most, the ferns not so bad, but the begonias really couldn't take it. They always suffered. I don't remember any other protection my folks used.

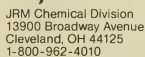
My uncle lived next door. He would cover the dwarf lemons by draping — I think it was gunny (burlap) sacks over them. He also mulched the roses up real high around the base of the plants. Another friend of my folks, who lived in National City, used to staple aluminum foil around the inside of his lath house, so that the middle of the foil roll was about chest high. Then he ran an extension cord out and hung a 100 watt bulb in the middle of the lath house. He claimed the bouncing of the light back and forth amongst the aluminum would keep the plants from freezing. My Dad would look real interested, and nod, yes, but I never saw him do it!

This friend had a much larger lath area and grew lots of begonias, epiphyllum, maidenhair ferns, staghorn ferns, hoyas, gardenias, amaryllis, and roses, roses, roses. I wouldn't run out and buy a bunch of light bulbs yet either because I remember trips over to National City to view the frost damage. Well, it wasn't the light bulb's fault, you see, because it got much colder there, so the story went. Did you ever have a friend who, no matter what you show them, they have one that is bigger, blooms more, costs more, prettier, got hotter, or colder, or wetter, etc.? Well, this was one of those. So we couldn't outgrow him or out freeze him or anything.

I have a friend in La Jolla, who made his shade house out of fluorescent tubes laid in a rack, side by side, to make a solid roof. This worked almost like a greenhouse, and it provided lots of light, too. Most of his yard has every other lath covered, but he has a multitude of vines growing every

In the winter time, as the sun comes more from the south, and we need more light to grow

Stepping out the back door is where the real fun begins. A covered patio extends the whole back of the house, and about 12 feet out into the yard. The roof is composed of 10 feet of shadecloth on each end and, 34 feet of white corrugated fiberglass in the middle. This area is also planted with tall tree ferns, indoor palms, bromeliads, staghorns, begonias, fuchsias, and



tropicals, but nestled in amongst these, is a wide variety of very unusual orchids. Stephanotis and anthuriums spend the summers out here. Genie is a master at growing those things known to be difficult. Tell her "that won't grow here!" and you will see a twinkle in her eye that says "Oh yeah!" She seems to take it as a challenge.

Mandevillas and Draculas from the very cool areas of Columbia and Peru are all around in a free form rock bed. Many of these plants bloom several times throughout the year. Disas from Africa flourish in amongst the other plants. Genie has developed a special technique for growing these little gems. With a lot of patience, she has found the secret to become one of the few successful growers of this plant in the entire United States, but after seeing the technique she uses, it's something most of us can now duplicate with a minimum of effort. Genie is now trying to germinate the seed of this very difficult species, but so far had no success over the past two years.

In the times frost is suspected, Genie places fans around the patio and the yard to keep the air moving. This seems to keep the plants from freezing, even though the dogs get an icy treat the next morning. Worst damage this last hard frost was to the **Draculas** and **Odontoglossums** which are supposed to take that kind of weather. Go figure! All the other plants in this area went through with no frost problems.

Behind the patio on the left is some 65% shade cloth reaching to the little greenhouse on the back, and around the west side of it. This area has the best collection of miniature orchids I have seen, all neatly nestled together, some in pots, and some on bark. Lots of the little guys are hanging on the bigger orchids. They hang on

the greenhouse wall, on the shade cloth, and reside on two benches, one about a foot above the ground, the second at about 30 inches from the ground. Specimen size plants, that means really huge, of some Brazilian orchids hang here and there, and tiny blooms poke their heads out and about from every angle. This area was left just as is during the last frost with minimal damage. This was not the plan! Plastic cloths had been obtained for draping over the plants in case of frost, but after all, it was coldest on Christmas Eve, and the plastic never got deployed.

Out in a small area with grass, surrounded by high planters, are some Junipers alongside Cymbidium orchids, water lilies in half an oak barrel, bird of paradise, lily of the Nile, pigmy date palms, maidenhair ferns, plumerias, passion vine and some vandas. The water lilies woke up Christmas morning in a frozen bed of 1/2" thick ice, but the various pond grasses, gold fish, and the water lilies survived with no protection at all. The vanda orchids had turned to transparent mush, the plumerias were also badly damaged as well as the passion vine. All the other plants I mentioned fared really well. These plants had all survived several nights of 27 degrees, but Christmas Eve the temperature dropped to 26 degrees.

I have to mention this for all the orchid growers. Genie had some vanda trees and the likes, she tried all over the the yard, and they just didn't seem to grow well. But she finally found a way to make them grow super! Guess where I found them, stuck in the oak barrels with the water lilies up to their midsection in pond water! Great roots and spikes all over them! I have never seen this plant growing so well.

The greenhouse was under renovation. Genie



CLASSIC GARDENS
Landscape Design & Construction

We are offering a complete service in landscape design and installation.

(619) 459-0316
License no. 471422

ENTER A WORLD OF
OUTDOOR ENJOYMENT



WALTER ANDERSEN NURSERY
3642 Enterprise Street
San Diego, CA 92110

OPEN 7 DAYS
A WEEK

8:00 A.M. TO
5:00 P.M.

(619) 224-8271

FREE GARDEN CLASSES
9:00 A.M. - SATURDAY MORNINGS

Antonelli Brothers

TUBEROUS BEGONIAS
2545 Capitola Road
Santa Cruz, California 95062

36-page Color Catalog 25 cents



**ARTISTIC
PRUNING**

Landscape Design
&
Execution

JIM STELLUTI
298-7641

and her son, by themselves, completely stripped the wood, applied protection and painted the wood. Now they are planning new benches that will be made to last forever. (She really didn't enjoy taking out the old ones!)

An intricate water collecting system around the yard preserves as much rain water as possible, (what rain water?) This was used on some of the plants that "won't grow here" for awhile, but they seem to have acclimated to the water as well as the climate.

So the moral of this story is to provide the overhead protection the plants will need, knowing the frost will come every few years. Keep some plastic sheeting handy for the worst predictions, and most of your plants will probably survive. NEVER give up on that "hard to grow" plant, you can overcome! As to the secrets for growing some of those tough orchids, you will have to come to an Orchid Society meeting, and pester Genie for them!

I had an idea for frost protection that I have never actually tried out. I once made some patio lights this way. I planned on using a long wire that can be strung around the yard on the ground, through the planters, under certain potted plants etc. This will have to originate on a circuit that contains a Ground Fault Interrupter for safety reasons. I planned to make a small drop cloth of sheet plastic for each planter or plant I wish to protect. I think a wire frame can be fashioned from heavy gauge wire to support the plastic.

Christmas lights are very low wattage, about 7 watts I think. Small fittings are available that you can put on the electric wire anywhere you want by just tightening the fitting on the wire. One of these can be placed under each plastic cover and I think the little bulb will provide enough heat to keep the plants warm enough to not freeze. Fifteen of these little bulbs will not use any more juice than a 100 watt bulb. Check the wattage of the bulbs you use and multiply by the number of bulbs. That will give you the wattage you are using. I wouldn't go over 110 watts per line that you make. Run another line for more. I think you should consult an electrician if you are as un-knowledgeable about this as I am. Should work nifty, but I just never had the time to put one together. It's sort of a drip system of heat. Well, if anyone gets to try this out, let me know how it works!

Until next time, when I intend to tell you about more yards and "frosty" experiences . . .

Harry

Picking A Garden Hose



By Pop Larsen
Builders Emporium

Three things to look for when picking a garden hose: 1) **Flexibility**, 2) **Kink-resistance**, 3) **Burst strength**.

If you buy an inexpensive hose, it tends to become rigid as the outside air temperature drops due to the materials used. The more expensive the hose, the better its materials, and the more flexibility it will have.

Making the wall of the hose heavier is how manufacturers prevent kink tendencies. The better hoses have heavy walls. Kink-resistance is something to think about. If the hose twists and kinks during use, maximum performance cannot be obtained.

If you buy a hose with no reinforcement, there is no burst strength. Keep in mind the closer the knit of the reinforcement fiber, the higher the burst.

Other things to look for if you want a good hose are: 1) **A heavy-duty coupling**, 2) **Good construction at the end which connects to the water supply**.

Ordinary garden hoses should not be used to fill drinking water holding tanks, potable water tanks, such as those found in campers or boats, or any other storage device. Use only a hose designated as non-toxic.

If you take care of your hose, such as coiling your hose on a suitable holder or reel, and you have a good hose, it will serve you for a long time.


GOOD EARTH LANDSCAPE

LANDSCAPE INSTALLATION & MANAGEMENT
INTERIOR PLANT DESIGN & INSTALLATION
PLANT AND CONTAINER LEASING

(619) 276-6411

DAVID MILLER

355615



perennial
adventure

Unusual plants for the garden. Open Saturdays or by appointment.

christine s. wotruba
10548 anaheim dr.
la mesa, ca 92041
(619) 466-1203

Hibiscus Is The Subject Of Quail Botanical Gardens Poster



by Gilbert A. Voss F.R.H.S.
Curator, Quail Botanical Gardens

In May 1989 Quail Botanical Gardens will issue an original poster depicting three types of hibiscus drawn by botanical artist Irina Gronborg. This will be the sixth in a series issued twice a year to help promote the fund raising activities of the garden's non-profit foundation.

Hibiscus is a large genus of more than 250 species of herbs, trees, and shrubs native to warm temperate and tropical regions. The hibiscus illustrated by the poster belongs to the Section *Lilibiscus*, a group of genetically compatible species which include the so called **Hibiscus Rosa-sinensis**. There are thousands of hybrids in existence, and these constitute the state flower of Hawaii. The origin and history of these hibiscus is a complex and fascinating one. Much of what we know today is due to the pioneering efforts of Ross Gast, a California horticulturist who spent much of his life dedicated to unraveling the mysteries. Through exploration and back crossing the various species with hybrids, Mr. Gast has cleared a path for further research.

Hibiscus Rosa-sinensis is the most famous species and was the first to be described. Linnaeus in his "Species Plantarum" (1753) called it a double flowered red which had a wide distribution throughout China, India, Southeast Asia, and the Pacific Islands in pre-European discovery days. E.D. Merrill, the botanist with Captain James Cook, suggested that the plant was a pre-Magellan, man introduced species from the west. The known species of **Hibiscus** that are genetically compatible with all forms of **H. Rosa-sinensis** and with one another are **H. schizopetalus**, an African East Coast species; **H. liliflorus** from Mauritius and Rodriguez Island; **H. fragilis** and **H. boryanus** from Reunion Island; **H. arnotianus** and **H. kokio** from Hawaii; **H. storkii** from Fiji; and **H. denisonii**, of unknown origin. It is generally agreed that from these species all forms of **Hibiscus Rosa-sinensis** have evolved. This indicates that the ornamental hibiscus designated as **H. Rosa-sinensis** is in reality a highly polymorphic group composed of complex hybrids and their derivatives.

Yellow is a flower color found only in the species native to the Mascarene islands of Mauritius

and Reunion in the Indian Ocean off southern Africa. It is believed that most of the yellow flowered hibiscus have one of these as a parent. Illustrated in the poster is **Hibiscus fragilis**, a species thought at one time to be extinct, but rediscovered by Ross Gast in a garden on Mauritius. The second hibiscus illustrated on the poster is a single yellow-orange that is commonly sold in California as cv. Accra. This is a very old cultivar that Mr. Gast observed in cultivation at localities in southern Africa. It is possible that it is one of the hybrids created during the early 19th century by the English plant enthusiast Charles Telfair while he lived on Mauritius and grew many old forms of **Hibiscus Rosa-sinensis**, crossing them with native species. He sent cuttings of his hybrids to the famous plantsman Robert Barclay of Bury Hill, Surrey, who introduced them to English gardeners. Undoubtedly many of these hybrids found their way into cultivation at various ports along the African coast as sailing ships rounded the Cape of Good Hope to pick up cargo or slaves. Accra, a port of Ghana, is infamous for its role as a shipping point for slaves, and the cultivar of that name may have come from there.

The last hibiscus illustrated is the cultivar "Crown of Bohemia", a double orange-yellow, that is now widely cultivated around the world. Its color and the fact that it has been grown in Africa for a very long time suggest that it, too, is a hybrid that may have **Hibiscus fragilis** in its parentage.

The three hibiscus drawn from plants at Quail Botanical Gardens illustrate an endangered species, **Hibiscus fragilis**, and two cultivars that were possibly derived from it through hybridizing. Quail Botanical Gardens in Encinitas, California, has a large collection of **Hibiscus** species and both early and modern cultivars from around the world.

For further information about the plants contact Gilbert A. Voss, Curator, Quail Botanical Gardens, 230 Quail Gardens Dr., Encinitas, CA 92024. Tel. (619) 436-8301.

For information concerning the art work, contact Irina Gronborg, 424 Dell Ct., Solana Beach, CA 92075. (619) 481-9105.

Angel-Wing Begonias

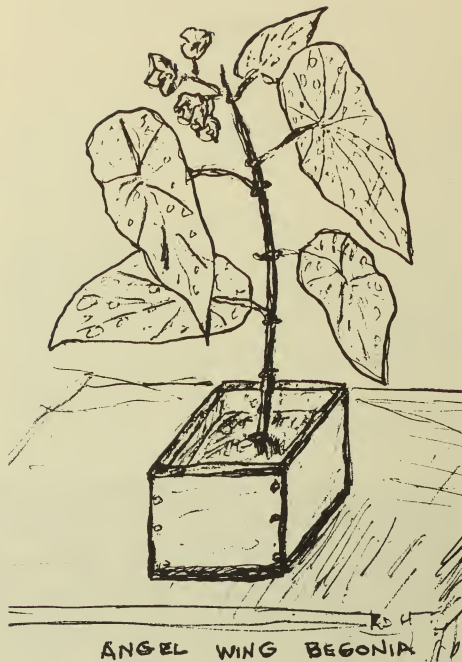
Story and illustration by

Robert D. Horwitz

The angel-wing begonia is one of the showier varieties of fibrous begonias that could be called cane-stemmed begonia because of the resemblance of their stems to those of bamboo-like plants that have swollen joints or nodes where leaves and flowers emerge from the stem. Angel-wings can grow quite tall, getting to four feet, and will thrive nicely in pot cultures. The leaves are usually a dark green, some hairy, with light green spots or small blotches spread throughout. The veins are prominent. Some have reddish brown tinges along the edges of the leaves and the veins. Some have deeply lobed leaves, or roundish, or long and angular leaves. All of them are beautiful. The flowers are usually pink, but there are varieties that have blooms ranging into the deep reds. The flowers appear on the young green stems in gay bunches and can last up to several weeks. To encourage flowering, prune back the older canes after they have produced blooms to cause new growth to occur. Fertilize lightly after you have done the pruning.

The culture for angel-wings, like most begonias, calls for a light airy soil with good drainage, and plenty of humus. A neutral to slightly acid Ph is desirable. Not much fertilizing is required, except when pruning takes place. They prefer partially shaded places, such as that found under a leafy tree where dappled sunlight can play upon them. Temperature ranges from 45 to 85 degrees Fahrenheit suit them just fine. When the weather is warm, they will require more water. However, overwatering can cause leaf drop.

Propagation of angel-wings is a treat, especially for the beginning gardener. The results of this simple procedure is a great confidence booster. Cut off mature stems that are about six inches long just below a node. Choose ones that would snap, if you bent them sharply as you would an asparagus stalk. Remove all but two leaves on the top, and let the cut heal for a day or two. Then, put the node part of the stem into a vial of water, or into damp sand, or potting mix. Keep the material damp. Soon roots will appear out from the node. When this occurs, you can transplant the stem into its permanent pot. After it establishes itself in its new home, you can fertilize it gently.



ANGEL WING BEGONIA

Growing them from seed is possible, but much more difficult. The seeds are very fine, like brown dust. They can be obtained from the mature flower seed pods long after the petals have dropped away and the pod swells, gets ripe, and dries. Spread the seeds thickly over a sterile growing medium which you keep damp by covering with clear plastic or glass. Spring is the best time to do this. When the seedlings have displayed their first true leaves, you can transplant them into pots for further development.

When angel-wings get too leggy, cut the stems back to about six inches above the soil, and an inch or two above a node. This will stimulate new growth both from the root area, and from out of the nodes on the stems. A little fertilizer at this time will aid in speeding up the new growth.

Limited Edition

Watercolors
of Orchids

\$85 - \$350

Send \$2 refundable
for information and
illustrated brochure:

Babette Eddleston, BFA
P.O. Box 8066 - Red Bank, NJ 07701
(201) 758-6450
Commissions Accepted



The Betel Nut Palm

By Bill Gunther

Areca Catechu is a beautiful palm; it grows slim and tall, with a graceful crown of pinnate leaves. The precise spot of origin of this palm is unknown, for the reason that — like the coconut and the date — it has been grown under cultivation all over the tropical world for thousands of years.

However, the reason for man's attachment to **Areca Catechu** is not that it is a very beautiful palm, but rather that its seeds, known as **betel** nuts, are somewhat addictive.



In the hands of Made Rudeg is a "quid" of betel nut, for which he paid the equivalent of 2 cents, opened to reveal the contents: leaves of the plant *Piper betle*, pieces of the seed of the palm *Areca catechu* (center right), pieces of lime (upper center), and chewing tobacco (lower left). In combination, this constitutes an addictive drug.



Made Rudeg, of Bali, at age 95 years, sets a "quid" of betel nut while sitting on the veranda of a delightful Balinese restaurant where we interviewed him.

Back in 1869, Alfred Russell Wallace wrote of the South Pacific Islands that "all the little children here, even such as can just run alone, carried between their lips a mass of nasty-looking red paste, which is even more disgusting than to see them at the same age smoking cigars, which is very common even before they are weaned."

But that was over a century ago. Now, in 1989, the situation has changed. In the South Pacific, **Areca Catechu** still thrives — but its addicts now mainly are very old men.

The accompanying photo, taken in 1988, shows such a man. He is a citizen of Bali; his name is Made Rudeg; his age is 95 years.

Mr. Rudeg pays 50 rupiahs (equivalent to about 2 US cents) for a betel nut "quid" and a follow up of chewing tobacco. A quid is a few pieces of an **Areca Catachu** seed mixed with a bit of chalk paste, and wrapped in one or two leaves of the plant **Piper Betle**, a member of the pepper family. He slowly chews the quid, which almost immediately stimulates a large quantity of saliva, deeply colored red by the quid. With his bare feet, he digs a hole in the ground, spits a copious gob of red juice into it, then covers it over. Next he takes the bit of chewing tobacco, and savors it.

Made Rudeg, at 95, is healthy, and happy to be alive. He retains about half of his teeth, but they are discolored to almost a black hue by his chewing of betel nuts. But he firmly believes that were it not for his betel chewing, he now would have no teeth at all, and further, that without betel nuts he would not be alive today. His memory remains bright; he vividly remembers those days of World War II when the Japanese occupied Bali. And he equally remembers before that when Europeans occupied Bali.

Then Mr. Rudeg pauses to state his opinion that the betel nut is not addictive, and that the only reason why he continues to use it is to preserve his health, and to protect his teeth from decay, and that the younger generations in Bali, for not using betel nut, are thus only serving to lose their teeth and to shorten their lives.

Rudeg then added that the follow-up slug of chewing tobacco which he uses as a "chaser" to each quid of betel nut, also is non-addictive. he insists that the chewing tobacco serves only as a mouth wash after use of the betel nut. And he insists that the only reason for chewing (rather than smoking) the tobacco is that smoking of tobacco is strictly forbidden by his Hindu religion.

We don't know; we are not doctors; we are just writers. But we very sincerely admire Made Rudeg. He is a living exponent of a passing era. To Made Rudeg we are sending a complimentary copy of this issue of the California Garden, and we know that he will derive pleasure from showing it to his friends in Bali.

Made Rudeg now is 95 years old. We wish for him a continued very long life.

'Pro-Gro' Injector, Fertilizer

By Marilyn Myers

The PRO-GRO automatic fertilizer injector and PRO-GRO dry fertilizer, designed for use with the new injector, are now available from TFS SYSTEMS, according to company president Thomas F. Strong.

Available in pint, quart and half-gallon sizes, the new injector is designed to distribute the PRO-GRO 20-20-20 dry fertilizer in a fairly constant ratio each time the irrigation system is in operation. Strong said. "As with our other fertilizer injectors, the PRO-GRO is easy to install and simple to use," he noted. "The PRO-GRO injector can be used with either conventional sprinkler or drip irrigation systems."

The PRO-GRO 20-20-20 dry fertilizer, with more nutrients, can be used with any of the firm's other injectors in addition to the PRO-GRO unit. Because the fertilizer contains no organic materials, users with drip irrigation systems need not worry about contaminating or clogging the drip lines.

TFS SYSTEMS, a division of Trickle Soak Systems, is a leading manufacturer of automatic fluid injectors for private and commercial use. The firm has twice received recognition from the American Society of Agricultural Engineers for outstanding product design.

The San Diego-based company offers a complete line of drip irrigation equipment in addition to its line of fertilizer injectors. The main office is located at 8733 Magnolia, Suite 100, Santee, CA 92071.

Sprouts

By Eleanor Macy

In order for a seed to sprout and grow, it has to have enough nutrients stored inside to actually sprout and start to grow on its own until it has developed a leaf and root system to obtain nutrients elsewhere. These tiny sprouts are still loaded with nutrients, mainly thiamin (vitamin B) when you use them in your salad or sandwich. Not only are these sprouts a "health food," they taste delicious, too. Alfalfa and Mung Bean Sprouts are grown easily in a 1 or 2 quart-size jar. Use a piece of cheese-cloth or a piece of fine screening for a cover. Put about 2 tablespoons of seeds in the jar with about a half-cup of water, enough to more than cover the seeds. After soaking overnight, drain the water through the cloth or screen. Keep the jar on its side now, and out of direct sun. Rinse the seeds about three times a day. Do this for about a week. Alfalfa seeds need some light for greening. Mung Beans should be kept in the dark otherwise they develop too strong a flavor. Harvest when about 1-2 inches long.

(619) 448-0659

Open Sundays Only
By Appointment

Hardy & Fouquette Orchids
WHERE YOU FIND THE UNUSUAL
Along With The Usual

Carlton Hills

9443 E. Heaney Circle
Santee, CA 92071

Automatic Irrigation Systems Require Management

by Margarita M. Engle
Program Director
Mobile Irrigation Laboratory,
Mission Resource Conservation District

An automatic pilot flies a plane, right? Wrong! Would you get on a plane if you knew that the pilot was away on vacation and that your life was in the hands of an unattended automatic system? It's easy to see that planes need pilots, despite the most impressive advancements in automation. Yet, many people have their irrigation systems automated on the assumption that everything will be automatic. "It takes care of itself," is a common misconception. Automatic irrigation controllers do only what you tell them to do. Someone has to decide how often the water should run, and for how long. Most important, someone has to change the schedules as the seasons change.

Automatic systems must be checked regularly to make sure the sprinklers, valves and controller are all working properly. Systems operated at night may have undetected leaks, or sprinklers may stop rotating properly, resulting in a stream of water pointed at the driveway or street, instead of the lawn.

Consider the following scenarios:

- 1) It is raining; a neglected controller turns the sprinklers on anyway.
- 2) An irrigation system is installed during summer. Halfway through the following winter, a resident notices that the grass has died off on swampy patches of soil, and realizes that she doesn't know how to change the schedule to match winter weather.
- 3) A controller "misfires", running the same line of sprinklers over and over instead of following a programmed sequence; the result is excessive water use in one area, and none elsewhere.
- 4) A power outage alters irrigation schedules programmed into a controller; weeks go by before the errors are corrected.
- 5) Random numbers are punched into an unlocked control box by vandals or mischievous children; months go by before anyone realizes that some irrigation lines are receiving much more water than they need.
- 6) A single controller operates irrigation lines for low and high water use plants (for instance, ice plant needs much less water than lawn grasses), or lines which apply water at very different rates; yet every line is programmed to receive the same amount of water, whether it needs it or not.

7) A grove irrigation system is automated; the absentee grower suddenly stops coming around regularly; leaks and plugged sprinklers now go undetected.

All these incidents occur regularly, all waste water, and all can be avoided by providing the plane with a pilot; even the most sophisticated computerized remote control irrigation system requires management.

Automatic controllers include many features which can help you use less water. They allow you to irrigate at night when evaporation and wind effects are minimal. To prevent runoff on clay soils, controllers can be programmed to split a water application into two short cycles, several hours apart.

If you're the type of irrigator who wakes up in the middle of the night wondering if you remembered to turn the sprinklers off, then a well-managed control system can help you conserve one of our most valuable resources.

Leaving that same system unmanaged and unattended is as wise as riding an unpowered plane.



CHULA ORCHIDS
230 CHULA VISTA STREET
CHULA VISTA, CA 92010
PHONE 420-0746

ORCHIDS FROM AROUND THE WORLD

SPECIALIZING IN ORCHIDS THAT WILL GROW
OUTSIDE HERE IN SOUTHERN CALIFORNIA.

GREENHOUSE EQUIPMENT

AUTOMATIC HUMIDITY & WATERING SYSYS.
HEATER REPAIRS AT OUR SHOP

DISTRIBUTOR FOR J.M. MC CONKEY

POTS & GROWER SUPPLIES, OSMOCOTE,
GROW MORE FERTILIZERS, MAG-AMP

BOOKS

ORCHID BOOKS OF ALL KINDS

CARNIVEROUS PLANT BOOKS

BONSAI & PENJING BOOKS

AROIDS, TROPICALS, & FERN BOOKS

TILLANDSIAS & OTHER BROMELIADS

TILLANDSIA ionanthas - 10 OFF EACH GROWTH

CUT FLOWERS & FOLIAGE

DENDROBIUMS & ANTHURIUMS FOR THE
FLORIST TRADE AT WHOLESALE PRICES

OPEN 9 TO 5 MONDAY THRU SATURDAY

SUNDAYS OK BUT PLEASE CALL FIRST



One of Barbara Gallup's topiary lions waits in her greenhouse for the trip to the New York Flower Show.

For further info:
contact:
Andrea Bass/
Workman
Publishing
1 West 39th
Street
New York, NY
10018
(212) 398-9160

Photo credit:
Walt Chrynwski



Cliff Finch trims a newly planted topiary at his "Zoo".

Where Do Topiaries Come From?

By Cliff Finch

But first, what are topiaries? No doubt you've seen them — perhaps at an amusement park, a public garden, or maybe even in a neighbor's yard. A topiary is a plant sculpture, usually grown and trimmed around a wire frame. A topiary can take any shape the frame maker desires, but at Cliff Finch's Zoo, a topiary nursery in Friant, California, the plants have taken the shape of a menagerie of animals.

At any given time, Finch has at least a hundred animal topiaries lurking about the nursery grounds. There are ducks, frogs, rabbits, elephants, dolphins, reindeer, geese, squirrels, lions, or whatever other animal form happens to have caught his fancy. He welds each frame by hand, sometimes guided by his own imagination, sometimes by the imagination of clients. There are two of Finch's giraffes in Michael Jackson's gardens. Not long ago he sent a couple of rhinos to Hawaii. A beekeeper recently requested 30 bees. "Some people ask me to make their pets," says Finch. "One man even wanted me to make a topiary of his wife." (He obliged).

Finch sells the frames both unplanted and planted. An unplanted frame varies in price from a few dollars to several hundred. The cost of a planted frame depends upon the degree of growth.

It takes anywhere from three or four months to a couple of years for a topiary to become completely filled out, he says. A large, full grown topiary could cost as much as \$1,500.

A former deep sea diver, Finch got his start in the topiary-making business at the instigation of his father-in-law. "He had had a life long fascination with topiaries," says Finch. "He visited topiary gardens, took countless photos, made topiary scrapbooks. He had this idea of someday establishing a topiary nursery." Finch had both welding experience from his diving career and a background in art. "So, I guess, I got elected to be the one to put the idea into action."

People are very curious about the nursery, says Finch. Some see it as they are driving by, and stop in. Others flag him down when he is making deliveries and transporting topiaries in his truck. But mostly people hear about it through word of mouth and call or come visit. "It's something of a novelty. We're one of a handful — if that many — topiary nurseries in the country. It's as much a tourist attraction as it is a nursery."

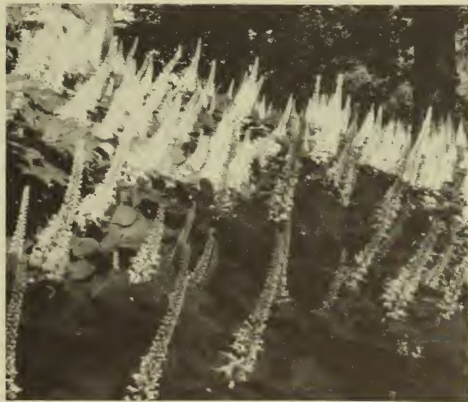
Contact: Cliff Finch (209) 435-6284 or 822-2315. His Zoo is located at 16923 W. Friant Rd., P.O. Box 54, Friant, CA 93626.

The Origin And Development of Botanical Gardens

By Thomas W. Whitaker

A unique institution in our Western culture is the botanical garden, which began as the so-called "physic" garden, in the sense of physic as a medicine or drug. Having spent nearly a decade of my adult life living and working in three of the most famous botanical gardens in this country, I have naturally had a mild interest in the history, development, and services rendered by these institutions.

Before the arrival of the space age, there were primarily three things that stimulated man to travel and search the nooks and crannies over the surface of the earth: namely, drugs, spices, and gold. The origin and early development of botanical gardens was directly related to the need in Western Europe of a steady and assured supply of drugs and spices. In the 12th and 13th centuries, prior to Columbus and the discovery of America in 1492, the need for spices was particularly acute. The diet of the people of Western Europe at this time was a pretty drab and dismal affair. It consisted mainly of starchy root crops, like turnips and rutabagas, along with the cereals, wheat, rye, and some barley. Coupled with this uninspiring diet was a chronic shortage of salt. The common spices such as pepper, nutmeg, cinnamon, cloves, and others, were either rare, or unavailable, and probably unknown to the great mass of people. Potatoes, tomatoes, corn, peanuts, pineapples, squash, lima beans, snap beans, and tobacco had not yet arrived from the New World to diversify the diet, soothe the nerves, and give people lung cancer.



Aesculus parviflora — Missouri Botanical Garden



Nelumbo nucifera — Missouri Botanical Garden

As for drugs, the physicians of this era were always on the alert for some new concoctions with which to treat their patients. The feverish search for new antibiotics and new sulpha compounds by the large drug companies is a comparable phenomenon of the present period, the only difference being humane, rather than experimental research. In an age still dependent upon horses and humans for transportation and communication, the botanical gardens became the logical place to collect, grow, and study medicinal plants.

The Chinese, as might be expected, were the founders of the idea of botanical gardens. As early as 2800 B.C., one of their Emperors — Shen Nung by name — dispatched collectors to distant parts of his empire to search for plants for the palace gardens. These plants were later tested for their economic and medicinal value. This individual is credited with being the Father of Chinese medicine. It is reported that he tested the medical qualities of many herbs. Several of them must have worked, because one account states that he cured diseases with some of his preparations. However, this source of information is delightfully vague about the specific diseases that were cured, nor is there any mention made by name of the drugs used.

Most surprisingly, there were gardens in Mexico before the arrival of Cortez. Prescott, the leading historian of the Conquest of Mexico, tells us that Montezuma had extensive gardens filled with fragrant shrubs, herbs, and other plants. Many of these plants were evidently used for medicinal purposes. The Aztecs are reputed to have advanced medical botany to the state of a science. One of their most famous medical gardens was located at Chalco. This garden survived the Conquest intact, and we are told that the plants were arranged more or less scientifically.

These two instances I have cited — one in China, the other in Mexico — had little influence on the development of the modern botanical garden. Our present-day gardens can be traced back to those that sprang up around the church monasteries in the ninth century. The monks who operated these monasteries were mostly of the Benedictine order. In addition to their vows of celibacy, they were not permitted to eat meat — one means of preserving their celibacy. As forced vegetarians, they lived on legumes, other vegetables, fruits, and nuts. Furthermore, they had to plant and harvest their own crops. As a result, these people became expert horticulturists. They were also well versed in botany, and in the knowledge of plants used for drugs. These monastic gardens became the precursor of what was later known as the "physic" gardens, established in connection with the medical faculties of Italian and other universities on the Continent during the sixteenth century.

About the middle of the sixteenth century, the first botanical gardens were founded for strictly scientific purposes. They originated mainly as an aid for the drug trade in its service to medical practice. Three of the most famous of these gardens — the one at Pisa, Italy founded in 1543, Le Jardin des Plantes in Paris (1543), and Chelsea Physic Garden of London (1673) — later on became general botanical gardens, in addition to functioning as drug-plant gardens.

Numerous botanical gardens sprang up on the Continent and in England during the 16th, 17th

and 18th centuries. One of them has been influential in world affairs ever since it was founded as a small physic garden in 1759. It became the Royal Botanic Gardens, located at Kew (Richmond, Surrey), near London, England. About 12 years after the Royal Botanic Gardens were established, King George III added to its size until it covers the present area of about 300 acres. At the same time he secured the services of a smart administrator and able scientist, Sir Joseph Banks, as his botanical advisor, to direct the affairs of the Gardens. Under Banks, the Royal Botanic Gardens became a world center for botanical exploration and horticultural research. He sent out collectors all over the globe, combing jungles, mountains, plains, and deserts for the beautiful, the useful, and the unique in plant materials. Banks developed a stable of five or six famous botanical collectors. One of them, David Nelson, was assistant botanist on Captain Cook's third voyage. Later Nelson was with Captain Bligh on the *Bounty*. He died as a result of exposure after being placed on one of the small boats by the mutineers, but not until after they reached Timor. Those of you who have read Nordhoff and Hall's *Mutiny on the Bounty* may recall that Nelson, the botanist, was the narrator of the yarn.

Sir Joseph Banks and King George III both died in 1820. The Royal Botanic Gardens went into a temporary slump, but commencing with the reign of Queen Victoria, it was again restored to a position of great prestige. During this period Kew was fortunate in obtaining the services of

DAYLILIES OF TOMORROW

featuring
our own new hybrids



Visit one of the finest Daylily
collections in Southern California

**CREATE YOUR OWN
TROPICAL LOOKING
GARDEN**

Easy care, full range of color. Blooms May thru December
(can also be grown in containers)

DON & MARY HARDGROVE

1656 N. Second St. (between Greenfield & Pepper Dr.)
El Cajon — 447-4922

Open Tuesday—Sunday 10 a.m.—5 p.m.

YOU ARE INVITED TO SUBSCRIBE TO . . .

California GARDEN

MAGAZINE

Since 1909

The perfect gift to a friend, relative or neighbor!

1 YEAR SUBSCRIPTION \$5.00

2 YEAR SUBSCRIPTION \$9.00

(Add \$3.00 per year for postage to foreign destinations)

OR BECOME A MEMBER OF . . .

SAN DIEGO FLORAL ASSOCIATION

INDIVIDUAL (magazine included) \$7.50

FAMILY (magazine included) \$8.50

(Please PRINT)

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

SAN DIEGO FLORAL ASSOCIATION

Casa del Prado, Balboa Park, San Diego, CA 92101-1619

two brilliant men as successive Directors: Sir William Hooker, a friend and intimate of Darwin; and his son, Sir Joseph Dalton Hooker. Under their wise administration and energetic leadership, Kew became an outstanding research organization.

The British successfully used this garden as an arm of empire. The Royal Botanic Gardens played a prominent part in connection with all matters of botanical enterprise in the British colonies. Through the agency of Kew, a few cuttings of the Para rubber tree were slipped out of Brazil, and eventually ended up in Malaya by way of Kew. This was the nucleus from which the vast rubber plantations of Malaysia and the East Indies originated. Kew also had a part in the transfer of cinchona, the quinine tree, from South America to India and the East Indies, where large plantations were established and a thriving industry developed. These are only two of the many successful plant introductions promoted by Kew.

Having no academic connection, Kew differs from most of the other botanical gardens. The chief function of this garden is with the economic aspects of botany, supplying information, and assisting as far as possible scientists, travellers, merchants, and manufacturers, wherever their interest impinges on plant products.

Since the days of the physic garden, the function of botanical gardens has changed, or more often there has been a marked shift in emphasis. In our modern society, their services to our culture may be enumerated and classified into four categories, as follows:

1. To grow as many of the best plants hardy in an area in order that home owners, landscape gardeners, nurserymen, and others interested in plants may become acquainted with their names, characteristics, and proper methods of culture.

2. To provide laboratories for students of the plant sciences and for nature study groups.

3. To collect and disseminate knowledge of plants to the general public.

4. To provide educational and recreational incentives to the public by means of walks, drives and displays, such as flower shows, fruit shows, garden shows, etc.

In short, a Botanical Garden is a sort of city park, but a particular kind of city park.

In this country there are several outstanding botanical gardens, most of which are civic enterprises, and nearly all of them are connected with some educational institution. Examples are the New York Botanical Garden associated with City University of New York; the Arnold Arboretum of Harvard University, the Morton Arboretum of the University of Pennsylvania, and the Missouri Botanical Garden, an integral part of Washington University in St. Louis. Another well-known garden, the Brooklyn Botanical Garden, is strictly a community affair, with no academic connection, and is governed by the Brooklyn Academy of Arts and Sciences. The fabulous Longwood Gardens at Kennett Square, Pennsylvania, are endowed by the DuPont family and are run by the Longwood Foundation, a DuPont charitable corporation.

In California we have a few botanical gardens, but none have achieved the stature of those that I have mentioned, perhaps because they are relatively young. There is the Huntington Garden at San Marino, which specializes in desert plants and succulents, and in camellias; the Rancho Santa Ana Botanic Garden at Claremont, which attempts to grow all of the native plants of California; the Los Angeles State & County Arboretum at Arcadia, interested mainly in woody plants; and the Strybing Arboretum in Golden Gate Park devoted to displaying ornamental plants that do well in the Bay Region. Here in San Diego the plant collection of the San Diego Zoological Society is becoming outstanding, although not specifically

Cynthia R. Drake

LANDSCAPE • HORTICULTURAL CONSULTANT

Landscape & Patio Designs
Landscape Pest Control

11121 Saunders Court
San Diego, CA 92131
(619) 271-8933

QUEEN PALMS

REGULAR \$145 NOW \$75

Cheapest prices available on
many palms and tropical plants

Call for more information

 **RANCHO LAS PALMAS**

(619) 579-6800

McDANIEL'S MINIATURE ROSES



BUSH • TREE •
CLIMBER •
HANGING
BASKET

HARDY AND EVERBLOOMING
SHIPPED ALL YEAR

7523 ZEMCO ST.
LEMON GROVE, CA 92045
Please Phone (619) 469-4669

a botanical garden.

One of the best on this continent is the Montreal Botanic Garden, operated by the City of Montreal and the Institut de Botanique of the University of Montreal. It has modern buildings and equipment, including 20 of the largest display greenhouses in North America. They contain a magnificent collection of tropical plants, probably one of the best in the world. Moreover, the plants are well grown and displayed in spectacular fashion. The collections of orchids, cactus and succulents are superb. One of the most educational features of this garden is the section reserved for economic plants. Here the plants from which we receive our daily sustenance are displayed in groups designed to show their relationship to each other. To me, it is astonishing to discover how many people cannot recognize plants of wheat, potato, cabbage, cucumber, tobacco, and others.

The botanical garden that I know best, and at which I have worked at three different periods in my life, is located in St. Louis, Missouri. It was founded by an eccentric Englishman, Henry Shaw, in 1859. This garden is known locally as Shaw's Garden, but Mr. Shaw, being a modest man, named it the Missouri Botanical Garden.

At the age of 19, Henry Shaw left England. He arrived in the booming wilderness community of St. Louis with a small stock of cutlery and an even smaller amount of capital, but determined to make his fortune. This he did rapidly by engaging in the hardware business. St. Louis at that time

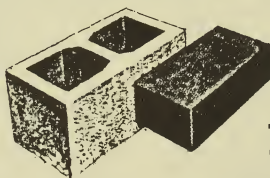
was the center of the fur-trading industry. His business grew so swiftly that he soon became the leading outfitter for the fur trade, selling knives, guns, and other hardware. He prospered so well that by 1840, at the age of 40 years, he was able to dispose of his business and entire stock of merchandise for \$250,000, a sum roughly equivalent to \$1,000,000 at the present purchasing power of the dollar. He retired from business and never again engaged in commercial enterprises.

The following ten years were spent in travelling. He made three trips to Europe during this period, taking voluminous notes and observing and studying all that he considered best in European culture. In the course of his final trip to Europe, he visited Chatsworth, a magnificent English estate, noted for its fabulous gardens. He decided then and there that his neighbors and middle-western culture in general would benefit most from a botanical garden.

Upon his return to St. Louis, he formulated specific plans for a garden, and proceeded immediately to fulfill them. The Garden was established on a 75-acre tract of ground around his home, located at the western edge of the city. A library was erected, and the necessary conservatories and greenhouses constructed. Mr. Shaw purchased several extensive collections of dried plant specimens. These collections served as a nucleus for the herbarium, which contains over 3,500,000 sheets at the present time. He commissioned a local physician interested in botany, Dr. George

HAZARD MART

San Diego County's Masonry and Home Center



A New Location To Serve You NOW OPEN!

5590 EASTGATE MALL — OFF MIRAMAR AND 805

FOR ALL YOUR LANDSCAPE AND GARDEN NEEDS — 3 LOCATIONS TO SERVE YOU!

HAZARD MART
Miramar
5590 Eastgate Mall
587-3636

HAZARD MART
El Cajon
1155 Vernon Way
448-7411

HAZARD MART
Chula Vista
491 "C" Street
427-2062

Engelmann, to purchase books for the library. Dr. Englemann spent several years in Europe at this task. As a result, the Missouri Botanical Garden Library has one of the best collections of herbals and rare botanical books in this country.

In order to insure that the Garden would be used for purposes of instruction as well as display, Mr. Shaw endowed a School of Botany at Washington University. This provided for an exchange of students and professors between the two institutions. Over the years this association has proved to be a fruitful one. Mr. Shaw's will provided for the Garden to be administered by a self-perpetuating Board of Trustees. This legal arrangement makes it improbable that the Garden, or its income, will be diverted to purposes other than those for which it was established.

Since about 1900 a steady stream of distinguished research has poured out of the laboratories and herbarium, and, even more important, the list of able scholars and exceptional administrators that received their training at the Missouri Botanical Garden is very imposing. The funds to support the activities of the Garden come largely from local property tax, endowment, from annual memberships, and research grants, and contracts.

Through a succession of annual events which feature different flower groups in season — such as a Chrysanthemum Show, an Orchid Show, a Dahlia Show, a Poinsettia Show, a Harvest Show, etc. — the staff manages to maintain a high level

of interest in plants throughout the year. In addition, the Garden sponsors a number of organizations interested in particular groups of plants; for example, there is an African Violet Club, a Cactus and Succulent Club, the Herb Society, Orchid Society, etc.

In the early 1960s the Missouri Botanical Garden built a geodesic dome, inspired by designs of Buckminster Fuller, as a tropical greenhouse. It covers an area approximately half the size of a football field. This structure has been appropriately named the Climatron, as it is fully air-conditioned. It is presently undergoing complete renovation and will re-open in late 1989, featuring new plantings and displays about the tropical rain forest.

This brief review will give you some notion of the origin and history of botanical gardens, along with an appreciation of their function in a modern community.

Acknowledgements: I thank Elizabeth N. Shor for editing this manuscript from one prepared originally for a lecture. I also thank Dr. Marshall R. Crosby for the photographs from Missouri Botanical Garden.

Dr. Thomas V. Whitaker, retired Geneticist from the U.S. Department of Agriculture, helped develop cultivated varieties of lettuce and melons. He is keenly interested in garden plants, especially those in the Amaryllis family.

Simply the Best !

"ADD-IT"

Automatic Fertilizer Injector



Simple to install. Simple to use. Compact. No moving parts, and no electricity required. Just fill the tank, and each time you irrigate, you fertilize. *And oh, the results...* "ADD-IT". It's simple.

That's why it's the best!



TFS SYSTEMS

A division of Trickle Soak Systems

8733 Magnolia Ave., Suite 100 • Santee, CA 92071
(619) 449-6408 FAX (619) 449-2368



ONLY
\$17⁰⁰

SOIL TESTING

TAKE THE GUESSWORK
OUT OF FERTILIZING!

PROVIDE YOUR PLANTS WITH
IDEAL GROWING CONDITIONS

If you would like a FREE Sampling Packet
please call us at (714) 862-7858



ILM Laboratories

2210 E. HIGHLAND AVE., SUITE 103-106
SAN BERNARDINO, CA 92404

Electronic News Service

By University of California
Division of Agriculture
and Natural Resources

Beginning Monday, January 9, a free, dial-up computerized electronic news service for quick and easy access to University of California Division of Agriculture and Natural Resources information is offered.

This service will operate 24 hours a day, seven days a week except for 8 a.m. to 10 a.m. each Monday, when its information will be updated. It will supplement mailed print and broadcast news and feature service.

The service is easy to call from your computer via telephone modem and to view and capture its information. (Modem call 1-800-548-1466 to give it a try. Keep the enclosed card on hand for easy future reference to our service.)

Subject matter includes consumer affairs, home gardening, agricultural research, energy and natural resources, and environmental toxicology.

Initially, our electronic news service will include news releases (updated each Monday or more often), monthly columns on home gardening, environmental toxicology, and consumer affairs, a biweekly listing of the Division's current, free radio service offerings, and a calendar of upcoming Division events that we believe might be of interest to you.

This is a pilot program. We hope you like and use it.

MODEM CALL 1-800-548-1466

UNIVERSITY OF CALIFORNIA
DIVISION OF AGRICULTURE AND NATURAL RESOURCES



CONSUMER AFFAIRS
HOME GARDENING
AGRICULTURAL RESEARCH
ENERGY & NATURAL RESOURCES
ENVIRONMENTAL TOXICOLOGY

Electronic News Service
Updated Weekly
Forrest Cress, Editor
Voice 714-787-3332

Specifications:
300,1200,2400 Baud
8 Data Bits
1 Stop Bit
No Parity



Remembrances of Things Past



A gallant lady.
A memorial come to pass!

By Spencer C. Church and Dr. Don Boyer

Through the generosity of the Roland and Ethel Hoyt Memorial Scholarship Fund, the San Diego Floral Association Board presented its first scholarship award in 1988. Cathy May, a spirited Horticulture student at Cuyamaca College was the recipient of this initial grant.

The Scholarship Fund was recently presented a supplementary check from the Ethel L. Hoyt Trust for \$10,000.00. The SDFA Board has stipulated that only interest derived from the Fund is to be used for scholarships, and recipients are to be horticulture students from San Diego County Colleges.

The SDFA Board has appointed a Scholarship Fund Committee to develop additional guidelines and administrative procedures for the handling of the Fund. Roy Jones, Dr. Don Boyer, and Spencer Church, Chairman constitute the review group. Additional information and methods of application will be published in the next California Garden Magazine.

The SDFA Board was impressed with the rare good qualities of Cathy May. She has received an invitation to attend a Board meeting to share remembrances, projections, and points of view in the plant world.

Single copies of the current issue of CALIFORNIA GARDEN magazine can be purchased for one dollar (\$1.00) each at the locations listed.

CALIFORNIA ARBORETUM FOUNDATION, Inc.
447-8207
301 North Baldwin Avenue, Arcadia, CA 91006
MISSION HILLS NURSERY 295-2808
1525 Fort Stockton Drive, San Diego, CA 92103
OUCHI NURSERY 263-6114
5003 Imperial Avenue, San Diego, CA 92113
PACIFIC TREE FARMS 422-2400
4301 Lynwood Drive, Chula Vista, CA 92010

California SINCE 1909 GARDEN

FLOWER SHOWS: Show chairman contact California Garden, 232-5762 if you want to have it sold at your next flower show.

SAN DIEGO FLORAL GARDEN CENTER 232-5762
Casa del Prado, Room 105, Balboa Park,
San Diego, CA 92101-1619
WALTER ANDERSEN NURSERY 224-8271
3642 Enterprise Street, San Diego, CA 92110



Book Reviews

Books reviewed by Mary Lou Orphey

INSECTS THAT FEED ON TREES AND SHRUBS by Warren T. Johnson and Howard H. Lyon 1988 Published by Cornell University Press, 124 Roberts Place, Ithaca, New York 14850 9 1/4 x 12 1/4 in. 556 pages Hardback \$49.95.

If concerned about healthy trees and shrubs, gardeners must be prepared to do battle against insects that attack these plants.

This exceptional book is a splendid pictorial encyclopedia on insects that harm trees and shrubs. For example: Azalea leaf miners: The life cycle is explained, there is a description of the leaf miner, and parts of the U.S. where it lives. There is a picture of an afflicted plant, three large photographs of leaf damage, a photo of an Azalea leaf-miner larva, and an adult leafminer in a resting position.

It would be wonderful if all gardeners could have a copy of this information book to consult as they try to identify insects that damage their trees and shrubs.

ORCHIDS by Joyce Stewart 1988 Published first in North America by Timber Press, 9999 SW Wilshire, Portland Oregon 97225 7 1/2 x 9 1/2 in. 124 pages Hardback \$19.95.

Complete with charming colored photos and plates, this attractive book would make a fine addition to one's library.

The "A to Z of Orchids" describes some of the most popular species and hybrids.

Also included is the history and conservation of orchids, and information on their cultivation, propagation, pests, and diseases. There is advice on seasonal care and growing orchids in greenhouses. Several compost mixes are included, and diagrams about mounting a seedling on a piece of cork oak bark.

HEBES & PARAHEBES by Douglas Chalk 1988 Published in North America by Timber Press, 9999 SW Wilshire, Portland Oregon 97225 6 1/2 x 9 1/2 in. 152 pages Hardback. \$32.95.

An evergreen with white flowers, Hebe is the largest genus of native New Zealand plants. In Britain, they are commonly referred to as shrubby Veronica. However, there are distinct differences between Hebe & Veronica; they are really considered to be separate genus (Veronicas are mostly deciduous and herbaceous).

This hardback correlates growing conditions between New Zealand and Britain that are suitable

for growing Hebes and Parahebes. The author discusses the features of Hebes, growing, propagation, and how to choose them for rock gardens, ground covers, medium size borders, background, hedges and tubs.

There are alphabetical lists of Hebe, Chionohebe and Parahebe species, varieties, and cultivars. There are black and white illustrations in addition to some colored plates.

THREE YEARS IN BLOOM, A Garden Keeper's Journal by Ann Lovejoy 1988 Published by Sasqatch Books, 1931 Second Avenue, Seattle, Washington 98101 8 1/2 x 11 1/2 in. 158 pages Hardback \$14.95

For gardeners interested in reflecting on their successes and failures, or planning, or photographing their gardens, this hardcover book can provide a splendid perspective to their efforts.

There is plenty of room to write briefly, paper graphed for diagrams, pages specially reserved for photography, and reminders of chores to be done.

This attractive book would be a lovely present for a special gardening friend.

Books reviewed by Harry Tolen

FLOWER GROWING WITH A MICROWAVE by Titia Joosten, Lark Books, 50 College Street, Asheville, North Carolina, 28801, 1988, (distributed by Sterling Publishing Co. 2 Park Avenue, NY 10016). 72 pages, 6"x8", Softcover, \$8.95.

A neat little book reprinted from a book published in the Netherlands. Some very attractive pictures of arrangements of flowers dried this way makes this a very interesting project book. Complete step by step instructions for conventional oven or microwave oven are included. An important list is included of all the various types of plants they have tried it on and tips for each. Lots of project ideas for bouquets, wall hangings, picture frames, centerpieces and others in full color pictures. You'll also find out in a very simple explanation just how a microwave works and how it is able to dry the flowers with even more natural color than when dried with other means. I found the book very interesting.

SEED PROPAGATION of Native California Plants by Dara E. Emery, published by the Santa Barbara Botanic Garden, 1212 Mission Canyon Road, Santa Barbara, CA 93105, 1988. 115 pages, 6"x9", Softcover, \$9.95.

You can't always judge a book by its cover right? Definitely! This simple looking little book contains 20 years of experience by Dara Emery, head of the plant breeding program at the Santa Barbara Botanic Garden. It's especially designed for the person who wants to propagate our native California flora. There must be close to a thousand plants covered showing the scientific name, common name, and the treatment used for successful germination. This sounds rather simple, but some of these native plants need some very unusual nudging

to come into this world. If you are interested in propagating this type of plant this book will save you a world of disappointments.

WREATHS by Richard Kollath, Published by Facts On File, Inc., 460 Park Avenue South, New York, NY 10016, 1988. 144 Pages, 8 1/2" x 8 1/2", Hardcover, \$18.95.

A fine little book, well worth the price. Excellent color throughout, in fact the photography makes the book. Once the basics for wreath making are covered, there are scads of color ideas for you to work from. Step by step instructions will make wreath making quickly your forte!

THE GARDEN PRIMER by Barbara Damrosch, Published by Workman Publishing Company, Inc., 708 Broadway, New York, NY 10003, 1988. 673 Pages, 6"x9", Softcover, \$16.95.

This compact, fat little book contains everything you ever wanted to know about gardening, from flowers to veggies, from the bright idea in your head, to the maintaining of your plantings. Source lists on gardening gear and supplies, seed and plant catalogs, gardening societies, and other resources will be extremely helpful to the novice or the experienced gardener. I wondered how one person could ever accumulate this much experience and information until I read the thank you's in the front of the book. Barbara thanks about 55 persons and businesses for their assistance in putting this book together. The result is a comfortable book to curl up with when planning the next day's assault on your garden, whether it be in your head or in your yard. No color, but 363 very detailed illustrations are there to assist you. Excellent indexing and I like the friendly format.



Open 7 days
8:00-5:00
436-0928

Select from hundreds of exotic palms,
scheffleras, dracaenas, cycads and more.
Thousands of hanging baskets and
flowering plants to add beauty and
color to your yard and patio.



I-5 to La Costa Ave.
East to Frontage Rd.
South 3 blocks to Sparta



CHINESE PENJING by Hu Yunhua. Published by Timber Press, 9999 SW Wilshire, Portland, Oregon 97225, 1988. 171 pages, 8 1/2" x 11", Hardcover, \$39.95.

Another book done extremely well by Timber Press. 165 of the finest color photos you could ever want. "Penjing, the art of growing miniature trees and landscapes." The pictures in this book were gathered from all over China, many of the penjing were created by famous masters in the art. New to me was the landscape penjing. Typically we think of a miniature tree as Bonzai, but penjing goes much further. The subject may simply represent an ice scene at the south pole, with no plants what-so-ever. The pictures are not to be glanced at. I spent more time on this book just gazing at them, enjoying the fine old miniatures especially. Some of these plants pictured are over 500 years old.

There are complete instructions for creating your own penjing, a background of the art in China, but the pictures are so clear and beautifully done they kept calling me back. This is definitely a book I will have on my shelf. Who knows, I may try this myself. The book makes it look fairly easy, and explains very clearly how to trim and care for the plants. Very clear pictures and illustrations are included for planting your first specimen. Too bad, the ingredient I will never be able to supply is the 500 years! I think you will enjoy this book immensely.

Jelly Palm

(Butia-Palmac)

By Ruby Law

For an exotic landscape in the subtropical zones of California, choose a jelly palm tree, (**Butia-Palmac**), with its abundance of edible fruits. The beauty of growing and producing its fruit is a sight not easily forgotten by a lover of nature.

The jelly palm's glaucous green pinnate leaves arch outward swaying gracefully in gentle breezes. In between two leaves, emerge the large blue-green petioles or fruit stalks, three to five fruit stalks to a tree.

When the jelly palm's fruit stalks pop open, a spray of a large cluster of dark orange buds blooms almost immediately with yellowish flowers which, when pollinated by bees or other insects, produce a very tasty edible fruit.

The fruit ripens to a bright orange color and is ready to eat fresh. The fruit has not been marketed in any appreciable amount yet. As more people get acquainted with this sub-tropical delicacy, the demand may rise.

The propagation of the jelly palm tree is done by seed, sometimes taking as much as two years to get germinated.

There are a number of these trees growing in Upland and Fontana in front yards, adding to the beauty of landscaped homes.

NOW IS THE TIME...



A CULTURAL CALENDAR OF CARE FROM OUR AFFILIATES
Compiled by Penny Bunker

AFRICAN VIOLET Helen LaGamma

- protect** plants from any sudden change in temperature — maintain 65-75 degrees.
- provide** 12 to 14 hours of indirect light daily.
- water** only when soil is dry when watering from the top.
- pot up** babies in 2 1/2" pots using a light porous, sterile soil with good drainage.
- practice** preventive measures against insects and disease — clean hands and clothing.
- keep** all areas clean of plant clutter. Use only clean sterile equipment. Have area well ventilated.
- groom** for spring show April 1-2, 1989.

BEGONIAS Margaret Lee

- watch** watering program especially if no rain. Keep plants moist but not wet.
- clean up** — clear all dried leaves, trim spent blooms and dead wood.
- prune** for shaping plants, and encourage more side growth; prune gradually, not more than 1/3 of plant at a time to avoid shock.
- start** new cuttings, leaves, or seeds.
- mulch** with a top dressing to make sure roots are covered.
- repot** if heavy and compact.
- spray** for insects or disease control.
- feed** 1/4 strength of a good all-purpose plant food if feeding once a week; 1/2 strength if feeding twice a month, or full strength if once a month.

BONSAI Dr. Herbert Markowitz

- check** any excess blooms on deciduous and fruit-bearing trees; remove extra and leave just enough for an interesting view.
- repot** plants; shape to conform to container or design.
- graft** deciduous trees.
- watch** watering program, if no rains.
- correct** alkaline soil by an addition of small amounts of chelated iron or acidifying material.
- protect** trees putting on new growth — not too much sun to avoid scorching new leaves.
- wait** until April before fertilizing.

BROMELIADS Mary Siemers

- wait** until weather begins to warm up before starting fertilizing.
- remember** to check plants for scale, especially during spring when scale is more likely to appear.

treat plants with scale by dipping or spraying with a solution of 1 tablespoon of water-based Malathion to one gallon water. Shake excess solution, and place plant away from others until you are sure it is free of scale. If necessary, treatment can be repeated in two weeks.

start giving plants as much bright filtered sunlight as possible. This will give them a bright beautiful color and encourage them to bloom. Sharp serrated-leaf plants can take more direct sun.

repot plants that need a larger container.

They will be healthier. When repotting plant that is coming into bloom, return it to the location and orientation to keep it from aborting it's bloom.

keep plants clean by cutting spent blooms and dead leaves with scissors. Do not force them off by pulling, as it can leave a wound on the plant for a possible infection.

CACTI & SUCCULENTS Joey Betzler

water plants as the weather warms, but don't allow them to stay wet. When pots get noticeably lighter, water them.

fertilize for growth and flowering. Winter growers may slow on their growth.

protect plants from bright sun.

watch for windy days, potted plants can blow over if not securely fastened.

monitor new additions to your collection for insect pests, and keep away from other plants. They also can be treated easier for any disease or insects if separated from others.

acclimate plants to be placed in bright sun several weeks or they may be sunburned.

groom plants for exhibition in shows. Cleaning up plants helps monitor condition of plant. They may need repotting.

repot with a well-draining mix. Do not over-pot.

Rule of thumb is to leave an inch between plant and pot. Use folded newspaper to grasp those thorny specimens.

repot seedlings if they are doubled or tripled in size. If they have been in same mix for over six months, probably a good idea to repot.

CAMELIAS E.C. Snooks

keep up a proper watering schedule especially if little rain occurs.

feed with cotton-seed meal or commercial fertilizer.

keep blooms picked up to control petal blight.

add iron for good leaf color.

plant or transplant new or old plants.

prune out any unwanted growth — open the center to allow air circulation.

look for new varieties while they are still in bloom.

look for loopers and aphids — spray with Cygon if noted.

DAHLIAS Abe Janzen

- start** preparing the planting area by adding humus and fertilizer; Use 2 1/2 lbs. each of superphosphate and sulfate of potash per 100 feet of ground.
- place** tubers in starting medium such as vermiculite or sand.
- check** tubers for crown rot or soft spots and watch for too much moisture.
- plant** sprouted tubers sprout-side up, 6 inches below ground level, and 2 inches from stake. Cover with 3 inches of soil, moisten, but do not keep wet.
- be sure** to drive stakes into ground before planting tubers to prevent damaging them.
- protect** new growth from snails.

EPIPHYLLUMS (Orchid Cactus) George French

- feed** epiphyllums with a low-nitrogen fertilizer.
- step-up** watering, but soil must be well draining.
- check** trellis to be sure plants are well secured.
- give** plants filtered sunlight to encourage development of buds.
- bait** for snails, especially during rainy or foggy weather.
- check** for drainage in April. Do not move plants at this time, but continue to feed for bloom; use Hi-Bloom or Bloom-builder type to promote healthy buds and blooms.
- take** cuttings.
- remove** buds that may form on new plant; that energy needs to go to the root system.

FERNS Raymond Sodomka

- spray** for aphids and scale.
- remove** dead fronds.
- fertilize** with high-nitrogen liquid or pellets.
- divide**, repot, or add leaf mold or equivalent.
- catch** rain water to use on plants in covered areas.
- maintain** humidity by keeping surrounding areas damp.
- plant** spore.

FUCHSIAS William Selby

- prune** plants not done earlier.
- pinch** new growth on plants that were pruned earlier. As the third set of leaves form on new growth, pinch out terminal set. This will give a bushier plant.
- fertilize** with any good balanced fertilizer.
- watch** for insects and treat accordingly.
- water** thoroughly the day before spraying.
- continue** to take cuttings from prunings.
- clean** up fallen leaves, blooms, and other trash.

GERANIUMS Carol Roller

- water** thoroughly when plants become somewhat dry. Allow excess water to drain away. Keep foliage as dry as possible.
- continue** feeding with a balanced fertilizer dissolved in water using less than the recommended amount as often as needed

to keep the plants growing well. Long term pellets may be used instead.

- continue** pest control and disease prevention, using all products according to the manufacturers' directions.
- selectively** prune and pinch zonals and ivies for future bloom. Avoid cutting regals, scented, and related types because their flowers will be lost by pruning at this time.
- make** cuttings from the ivy and scented prunings.
- remove** faded flowers and old, discarded leaves.
- rotate** plants on a regular basis in order to produce well-shaped plants.

GESNERIADS Michael Ludwig

- clean** up debris around plants; discard old leaves and flowers.
- trim** and repot plants. If root-bound, cut off all dead roots that look brown and soft.
- start** feeding when new growth appears.
- clean** up growing areas and spray for mildew and mold.
- spray** for aphids before new growth is out; bait for snails and slugs.
- fertilize** with trace elements in April those plants that were not replanted. This replaces elements used by plant and lost in watering.
- transplant** seedlings in fresh soil and planting mix.

IRIS San Diego-Imperial Co. Iris Society

- clean** beds and keep weeds under control.
- water** regularly if no rains.
- start** feeding with a low-nitrogen, all purpose, or liquid fish fertilizer.
- watch** for pests - systemic sprays applied as a drench will usually free iris of aphids and thrips.
- give** Japanese and Louisianan acid food; camellia type fertilizer may be used.

ORCHIDS Charlie Fouquette

- repot** any Cattleyas that are showing new "eyes". Place back divisions in plastic bags so they will initiate roots, blow up bags with your breath (carbon-dioxide), seal plant in bag, and replant when roots are about 2" long.
- move** cymbidiums to shade as sunlight gets brighter (especially yellows and greens) to keep flowers from fading. Protect from showers those plants that are in spike. Hail can destroy flowers.
- repot** Paphiopedilum after blooming. Watch for sunburn if you have removed shading.
- protect** Phalaenopsis plants that are in spike from drafts and sudden temperature changes. Do not allow water to remain in crown of plants. Do not rotate plant if it has developed spikes. Shade areas that are

getting too much light.
check all coolers and heaters.
get new evaporative cooling pads, oil motors, clean up salt build-up in bottom of cooler (place a small amount of vinegar (1 cup) or 3/4 oz. of phosphoric acid in cooler water to help keep build-up of solids at minimum.
reverse osmosis units — open valves and flush until water is clear, then reset to proper percentages of recovery.
find a tolerant plant or plants to use the bypass water on.
save old bark and potting mixes to add to soil when planting trees and shrubs.
get ready for Orchid Show in March. Clean up plants and get ready week or so before.

ROSES Frank Hastings

apply inorganic, balanced fertilizer. The nitrogen should be at least 6% — apply monthly.
be sure to water the day before fertilizing. Water dry fertilizers after applying.
feed 3 tablespoons of liquid Fish Emulsion per gallon of water per bush 2 weeks after feeding dry fertilizer.
apply 1/2 cup epsom salts (magnesium sulphate) per bush to promote basil growth.
spread mulch around bushes to retain moisture and help keep weeds from starting.
disbud for one bloom per stem on Hybrid Teas and Grandifloras.
apply liquid iron in the middle of March for green leaves and better color of blooms.
spray once a week per instructions on container to prevent thrips from discoloring your blooms, and to prevent mildew and rust.
be sure to water the day before you spray to prevent leaf burn.

GREEN THUMB ITEMS

cut back poinsettias around St. Patrick's Day, removing last year's growth to within two joints of the old wood.
divide chrysanthemums — take cuttings from old plants and make divisions.
finish planting bare-rooted trees and shrubs in March.
set out annuals for fast growth and spring color.
plant perennials — carnations, gerberas, marguerites, Shasta daisies.
give a top dressing of fresh rich soil and humus to clivias, agapanthus, and amaryllis.
mulch and reseed lawns in April where necessary.
plant calla lilies, cannas, gladiolus, and tuberous begonias.
put some garden peas, snap peas and snow peas in your garden.
color up the garden with petunias. Plant them in flower beds, hanging baskets, other containers, or as a border.
sow vegetables, such as lettuce, radishes, corn and carrots in successive plantings to lengthen your harvest time.
integrate herbs into the garden by planting rosemary and wooly thyme as a ground cover. Place chives in there with your annuals, or simply allocate some containers to herb growing.
start feeding your camellias, azaleas, or rhododendrons with an acid fertilizer when they stop blooming.
feed hibiscus monthly now through September.

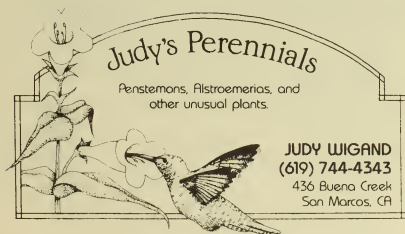
AFRICAN VIOLETS

STANDARD, MINIATURE, TRAILER
 DECORATIVE CERAMIC POTS — HELPFUL ADVICE
 SUPPLIES
 HOURS: TUE. — FRI. 10 A.M. — 5 P.M., SAT. 10 A.M. — 4 P.M.
PATCHES AND POTS — (619) 442-7037
 583 EL CAJON BLVD., EL CAJON, CA 92020

GET FREE SEEDS, PLANTS, BULBS, CUTTINGS
 plus gardening money-savers year-round by mail.
 Information 25¢
 Gardeners Share, P.O. Box 243, Dept. CG
 Columbus, IN 47202-0243

BALBOA PARK AFRICAN VIOLET SOCIETY

Meets at 7 p.m. — 4th Monday of each month
 Room 101, Casa del Prado, Balboa Park
 Dessert 6:30 p.m.
 Meeting and culture program 7 p.m.
 Visitors and members are welcome.



Passion Vine Flower Parts Are Symbolic

By Melba Davis

The passion vine's name comes from the way the parts of its magnificent flower symbolize the elements of the passion of the Lord in the Christian faith. The lacy crown is referred to as a halo or crown of thorns; the five stamens as the five wounds; and the ten petal-like parts as the ten faithful apostles.

There are many different varieties of this fast-growing vine, falling into the evergreen, semievergreen and deciduous categories. The foliage that forms a backdrop for the bright, showy flowers climbs trellises, walls or soil banks rapidly. Full sun is best. It is tolerant of many soils and requires average water and feeding.

Probably the best known and most widely planted variety is the *Passiflora alata*, which is evergreen or semievergreen. It does well in low desert, the inland areas of northern California, the northern coast and most of southern California (except the very coldest spots). The fragrant three

to four-inch flower is white shaded with pink and lavender, boasting a deep blue or purple crown. It blooms all summer. The leaves are three inches long and grouped in sets of three.

In the colder areas, this variety needs a warm place out of the wind such as against a wall or under an overhang. Use a layer of mulch over the roots in the winter. This one does not form any fruit such as the small orange-colored, oval fruit from the Blue Crown passion flower variety. That variety is similar in climate requirements, but the leaves are smaller and grouped in fives. The flower is also a little smaller, greenish white with a white and purple crown.

The passion fruit vine yields deep purple fruit about three inches long in the spring and fall. It is delicious in beverages, fruit salads and sherbets. This semievergreen vine is suited for the coastal regions of northern and southern California. There is also a yellow-fruited kind.



CATALOG '82

Our trees are selections of the best performing varieties available.

Closed Tuesdays

FRUIT • NUTS • BERRIES For Mild Climates

- STONEFRUIT TREES — Many on Zaiger semi-dwarf root stock
- APPLES — Anna, Dorsett Golden, Gordon, Granny Smith, Mutsu, Ein Shemer
- CITRUS — 65 varieties • FLORIDA BLUEBERRIES
 - KIWIFRUIT VINES — low and high chill
 - PERSIMMONS — 6 varieties
- MACADAMIA, WALNUT, ALMOND, CHESTNUT, PECAN
- MANGO, SAPOTE, BANANA, LITCHI, CHERIMOYA, PAPAYA

• DECOLLATE SNAILS •

4301 Lynnwood Dr., Chula Vista 92010
(619) 422-2400

REDUCE WATER USAGE

Improve Plant Growth

SARVON

may be the answer

ASK FOR IT AT YOUR FAVORITE NURSERY

An enzyme, humic acid, penetrant, and bacteria enhancing product that is widely used by professionals.

SAN DIEGO FLORAL ASSOCIATION & GARDEN CENTER

Under the sponsorship of the Park & Recreation Department, City of San Diego.

Meetings: 3rd Tuesday, February, April, June, October, Casa del Prado, Balboa Park, San Diego, California

OFFICERS

President

Vernice Putman 749-9587
15665 Fruitvale Road
Valley Center, CA 92082

1st Vice President

Frances Clare

2nd Vice President

Barbara Jones

Treasurer

Nancy Cottingham

Recording Secretary

John Gagliardi

Corresponding Secretary

Louise Lewis

Office/Financial Secretary

Tillie Marcus

Past President

Nancy Cottingham

DIRECTORS

Term 1986-1989

Mary Boykins

Lalitha Nayagam

Virginia Firth

Term 1987-1990

Spencer Church

Barbara Pruyn

Harry Tolen

Term 1988-1991

Bill Gunther

Jo Rathmann

HONORARY LIFE MEMBERS

Samuel Hamill

Beverly Kulot

Allthe Macdonald

Polly Whigham

Elizabeth B. Glover

BOUQUET WORKSHOP

Peg Walker

COMPUTER OPERATOR

Lynn Beyerle

EDITOR, CALIFORNIA GARDEN

Elizabeth B. Glover 264-6769

FLOWER ARRANGERS GUILD

Mrs. William J. Walsh 298-5182

FLOWER ARRANGING CLASSES

Marie Walsh 298-5182

HISTORIAN

Beverly Kulot 222-5480

HOSPITALITY

Barbara Jones 222-1032

HOST & HOSTESS

Dolores Wray 222-7438

LIBRARIAN

Elsie Topham 297-2167

PUBLIC RELATIONS

Mary Jordan 222-7665

TOURS

Barbara Pruyn 561-2436

AFFILIATE MEMBERS

ALFRED D. ROBINSON BRANCH

AMERICAN BEGONIA SOCIETY

Pres: Mary Zemcik 223-6439

4157 Catalina Place

San Diego, CA 92106

2nd Tues. Home of Members, 10:30 a.m.

AMERICAN BAMBOO SOCIETY

Pres: Mr. Richard A. Haubrich 481-9869

1101 San Leon Court

Solana Beach, CA 92075

AMERICAN BEGONIA SOCIETY

Pres: Arlene Davis

157 Monument

Rio Dell, CA 95562-1617

AMERICAN DAHLIA SOCIETY INC.

Memb. Chmn: Michael Martinovich

(516) 742-3890

159 Pine Street

New Hyde Park, NY 11040

AMERICAN HIBISCUS SOCIETY

ROSS GAST CHAPTER

Pres: Mr. Angus Graham 758-0473

6449 Via de la Reina

Bonsall, CA 92003

BALBOA PARK AFRICAN VIOLET SOCIETY

Pres: Helen LaGamma (619) 466-3793

7644 Circle Dr., Lemon Grove, CA 92045

Dessert 6:30; Meeting 7 p.m.

4th Mon., Casa del Prado

BERNARDO GARDENER'S CLUB

Pres: Mrs. F. Neal Fugate 485-8278

17888 Via Altiva

San Diego, CA 92128

BROMELIAD STUDY GROUP OF

BALBOA PARK

Pres: Wayne Siemers 284-2813

4614 Constance Dr., San Diego, CA 92115

2nd Tues., Casa del Prado, Rm 104, 7:30 p.m.

CALIFORNIA ASSOCIATION OF NURSERYMEN

SAN DIEGO CHAPTER

Pres: Ted Kniffing 561-8320

14940 Oak Creek Road

El Cajon, CA 92021

4th Wed., 7 p.m. Place varies.

CALIFORNIA NATIVE PLANT SOCIETY,

SAN DIEGO CHAPTER

Pres: Ms. Bobbie Steele 563-7708

4495 32nd St., San Diego, CA 92116

3rd Tues., Casa del Prado, 7:30 p.m.

CHULA VISTA GARDEN CLUB

Pres: Mrs. Lucy Morrissey

P.O. Box 5447

Salton City, CA 92275

3rd Wed., Rohr Pk Manor, Sweetwater Rd.

Bonita, 1:00 p.m.

CITY BEAUTIFUL OF SAN DIEGO, INC.

Pres: Mrs. Ruth C. Smith 488-0830

4995 Fanel Street

San Diego, CA 92109

1st Mon. S.D. Zoo, Rondavel Rm., 11:30 a.m.

CONVAIN GARDEN CLUB

Pres: Mrs. Virginia Soderberg 582-7098

6197 Arno Drive

San Diego, CA 92120

1st Wed., Casa del Prado, 7:30 p.m.

CORONADO FLORAL ASSOCIATION

Pres: Oliver D. Compton 435-1723

561 Marina Avenue

Coronado, CA 92118

Twice annually at call of President,

1113 Adelia Ave., Coronado, 7:30 p.m.

CROWN GARDEN CLUB

Mrs. William G. Williams 435-3985

821 Coronado Avenue

Coronado, CA 92118

4th Thurs., Coronado Library, 9:00 a.m.

DOS VALLES GARDEN CLUB

Pres: Mr. John Jacobelli 749-3303

26756 Banbury Drive

Valley Center 92082

2nd Tues. (except July and August)

Valley Center, CA 1:00 p.m.

EAST COUNTY ROSE SOCIETY

Pres: Martha Epler 579-6123

864 Sycamore Lane

El Cajon, CA 92019

1st Sun., various gardens, 2:00 p.m.

EXOTIC PLANT SOCIETY

Pres: George Plaisted 583-9551

6356 Delbarton

San Diego, CA 92120

4th Tues., Wells Rec Center

1235 E. Madison, El Cajon, CA 7:30 p.m.

FALLBROOK GARDEN CLUB

Pres: Mrs. Stanley Paine 723-9179

169 Orvil Way

Fallbrook, CA 92028

Last Thurs. each month except 3rd Thurs.

Oct., Nov., Dec., St. Peters Church 10 a.m.

FLEUR DE LEAGUE GARDEN CLUB

Pres: Mrs. Robert K. Smith 457-3066

3270 Caminito East Bluff No. 95

La Jolla, CA 92037

2nd Mon., Home of Members, 10:30 a.m.

GROSSMONT GARDEN CLUB

Pres: Mrs. Dolores Smith 464-2457

7443 Orien Avenue

La Mesa, CA 92041

2nd Mon. 4975 Memorial Drive

La Mesa, CA 92041, 9:30 a.m.

HEARTLAND AFRICAN VIOLET SOCIETY

Pres: Kemary Crowder 271-1844

8862 Shaula Way, San Diego 92126

3rd Thurs. 7 p.m. Home Savings,

396 No. Magnolia St., El Cajon, CA 7:00 p.m.

ICHIVO SCHOOL OF IKEBANA,

SAN DIEGO CHAPTER

Pres: Mrs. Haruko Crawford 660-2046

10411 San Carlos Drive

Spring Valley, CA 92078

IKEBANA INTERNATIONAL

CHAPTER 119

Pres: Mrs. Rex (Kay) Yarnell 435-0910

501 Country Club Lane, Coronado, CA 92118

4th Wed., except July and Aug.

Casa del Prado, 10:00 a.m.

IKENOBOKU CHAPTER OF SAN DIEGO

Pres: Mrs. Charles Oehler 278-5689

2822 Walker Drive

San Diego, CA 92123

INDOOR CITRUS AND RARE FRUIT

SOCIETY

Pres: Walter Doty (415) 948-3171

176 Coronado Avenue

Los Altos, CA 94022

INTERNATIONAL ARID SOCIETY

Pres: Bruce McManus (305) 271-3767

11691 SW 93 Street

Miami, FL 33176

LA JOLLA GARDEN CLUB

Pres: Mrs. Robert M. Boynton 481-0263

736 Bellairs Street

Del Mar, CA 92014

3rd Tues., La Jolla Woman's Cl., 1:30 p.m.

LAKE HODGES NATIVE PLANT CLUB

Pres: Dorris Baur 487-6614

16516 Gabarda Road

San Diego, CA 92128

3rd Mon. Glendale Federal

Rancho Bernardo 3:00 p.m.

LA MESA GARDEN CLUB

Pres: May Pollock 444-4983

6325 Primrose Drive

La Mesa, CA 92042

3rd Thu 11 a.m., La Mesa Woman's Club

5220 Wilson Ave., La Mesa, CA

LAS JARDINERAS

Pres: Mrs. Robert C. Macon 223-0118

467 San Fernando Street

San Diego, CA 92106

3rd Mon. Home of Members 10:30 a.m.

LEISURE WORLD GARDEN CLUB

Pres: Mrs. Wayne F. Dyer (213) 596-4161

13171 St. Andrews Drive 154L

Seal Beach, CA 90740

MISSION GARDEN CLUB

Pres: Mrs. Vera Elmer 447-8029

1285 E. Washington Ave., Space 109

El Cajon, CA 92019

1st Wed. North Park Recreation

Center, San Diego, 1:30 p.m.

NORTH COUNTY SHADE PLANT CLUB

Pres: Mrs. Drusilla C. Luers 439-3677

1635 Mt. View Avenue

Oceanside, CA 92054

3rd Sat. Ecke Bldg., Quail Gardens

Encinitas, CA 1:00 p.m.

OHARA SCHOOL OF IKEBANA

LA JOLLA CHAPTER

Pres: Mrs. Talmah Gaw 485-0116

13818 Tam O'Shanter Court

Poway, CA 92064



OHARA SCHOOL OF IKEBANA**SAN DIEGO**

Pres: Mrs. Walter Bourland 276-4667
2936 Havasupai
San Diego, CA 92117

ORGANIC GARDEN CLUB, SAN DIEGO

Pres: Mr. John Miller 660-9756
10836 Calle Verde Dr., No. 153
La Mesa, CA 92041

3rd Fri., every two months starting Jan.
Casa del Prado, 7:30 p.m.

PACIFIC BUCK GARDEN CLUB

Pres: Michiko Munda 272-9727
1544 Oliver Ave., San Diego, CA 92109
2nd Mon. 1 p.m. Recreation Center
corner of Diamond and Gresham

PALOMAR BEGONIA SOCIETY

Pres: Ingeborg Foo (619) 724-4871
1050 Melrose Way, Vista, CA 92083
Quail Botanical Gardens, Ecke Bldg. 2nd Sun.
230 Quail Gardens Dr., Encinitas 2 p.m.

PALOMAR DISTRICT CACTUS AND SUCULENT SOCIETY

Pres: Mr. J. Reese Brown 434-7224
2711 Athens Ave., Carlsbad, CA 92008
4th Sat. Joslyn Senior Center
724 N. Broadway, Escondido 12:45 p.m.

PALOMAR DISTRICT**CALIFORNIA GARDEN CLUBS, INC.**

Pres: Mrs. James Valana 421-6504
4112 Country Trails
Bonita, CA 92002

PALOMAR ORCHID SOCIETY

Pres: W.T. Mawhinney 439-9399
1565 Wilshire Road, Fallbrook, 92028
2nd Fri. Vista Senior Citizens Ctr. 7:30 p.m.

POINT LOMA GARDEN CLUB

Pres: Myrna Hines 222-2299
935 Armada Terrace
San Diego, CA 92106
2nd Wed., Sept.–Jun, 3598 Talbot at Canon
Westminster Presbyterian Church, 10 a.m.

PROFESSIONAL WOMEN'S HORTICULTURE AND LANDSCAPE ASSOCIATION (PWHLA)

Pres: Sue McDevitt
Box 3424, San Diego, CA 92103
4th Wed., Jan., Mar., May, Sep
1st Wed., Nov.
Call 753-1545 for further details

QUAIL BOTANICAL GARDENS**FOUNDATION, INC.**

Pres: Mr. Richard Poedtker 758-8332
1709 Montgomery Drive
Vista, CA 92083

RANCHO SANTA FE GARDEN CLUB

Pres: Mr. John Rainsford
Hort. Ch: Corrine Gruenwald
P.O. Box 1696
Rancho Santa Fe, CA 92067
2nd Tues., Rancho Santa Fe Garden Club
Avenida de Acadias, Rancho Santa Fe
7:30 p.m.

SAN CARLOS GARDEN CLUB

Pres: Joan Bales Mitchell 583-6826
7575 Conestoga Way
San Diego, CA 92120
4th Tues. Home of members, 9:30 a.m.

SAN DIEGO ASSOCIATION**PROFESSIONAL HORTICULTURISTS**

Pres: Tineke Wilders 294-8097
3511 Arizona Street
San Diego, CA 92104

4th Mon., Casa del Prado Rm 104, 7:30 p.m.

SAN DIEGO BONSAI CLUB INC.

Pres: Mr. Wayne Chapman 755-4451
P.O. Box 40037
San Diego, CA 92104, 11 a.m. Workshop
2nd Sun., Casa del Prado, 1:00 p.m.

SAN DIEGO BOTANICAL GARDEN

Dr. Herbert A. Markowitz 224-8552
876 Armada Terrace
San Diego, CA 92106

SAN DIEGO BROMELIAD SOCIETY

Pres: Pam Keide 438-9393
P.O. Box 83996
San Diego, CA 92138-3996
2235 Galatrad Road, Serra Mesa, 7:45 p.m.
1st Thurs. Byzantine Catholic Church

SAN DIEGO CACTUS AND SUCULENT SOCIETY

Pres: Chuck Adams (619) 530-2551
7305 Rock Canyon Drive, San Diego 92126
2nd Sat. Casa del Prado, 1:30 p.m.

SAN DIEGO CAMELLIA SOCIETY

Pres: Dean Turney 299-5418
631 W. Pennsylvania Ave.
San Diego 92103

3rd Wed., Casa del Prado, 7:30 p.m.

SAN DIEGO COUNTY BRANCH**NATIONAL FUCHSIA SOCIETY**

Pres: Ted Garrett 753-2665
498 La Costa Avenue
Leucadia, CA 92024
2nd Thurs. Palmquist School
1999 California St., Oceanside 7:00 p.m.

SAN DIEGO COUNTY DAHLIA SOCIETY

Pres: Mr. Gerald Lohmann 279-5135
6616 Rockland Ave., San Diego, CA 92111
4th Tues. except Jul & Dec., Casa del Prado

SAN DIEGO COUNTY HERB SOCIETY

Pres: Mrs. Eleanor Kimes 484-3553
13021 Trail Dust Avenue
San Diego, CA 92129

2nd Sat. except Jan, Jul & Aug, 11 a.m.
Homes of Members
Pres: Gene Hammond 426-6831

SAN DIEGO COUNTY ORCHID SOCIETY

1341 Park Drive
Chula Vista, CA 92011
1st Tues., Casa del Prado, 7:30 p.m.

SAN DIEGO DAYTIME**AFRICAN VIOLET SOCIETY**

Pres: Mrs. Betty Robinson 729-6772
3612 Laredo Dr., Carlsbad, CA 92008
2nd Mon., Fellowship Hall, Christ United
Methodist Church, 3295 Meade, 12 noon

SAN DIEGO EPIPHYLLUM SOCIETY

Pres: Sean Minogue 475-4478
808 Ethel Place
National City, CA 92050

2nd Wed., Casa del Prado, 7:30 p.m.

SAN DIEGO FERN SOCIETY

Pres: Bob Halley 272-1019
1714 Malden Street
San Diego, CA 92109

3rd Thurs., Casa del Prado, 7:30 p.m.

SAN DIEGO FUCHSIA & SHADE PLANT SOCIETY

Pres: Bill Simpson 420-6100
58 "I" Street
Chula Vista, CA 92010

2nd Mon., Casa del Prado, 7:30 p.m.

SAN DIEGO GERANIUM SOCIETY

Pres: Barbara Jolly 424-6659
1412 Tenth Street
Imperial Beach, CA 92032

2nd Tues., Casa del Prado, 7:30 p.m.

SAN DIEGO GESNERIAD SOCIETY

Pres: Denise Knobloch (619) 268-0610
3915 Argyle
San Diego, CA 92111

3rd Wed. St. David's Parish Hall
5050 Milton St. 7:30 p.m.

SAN DIEGO/IMPERIAL COUNTIES**IRIS SOCIETY**

Pres: Dorothy Driscoll 463-6700
6338 Lake Athabaska Place
San Diego, CA 92119

SAN DIEGO ROSE SOCIETY

Pres: Mrs. Miriam Yoder 942-0557
work — 295-2749
2615 Levante St., Carlsbad, CA 92009

3rd Mon Oct thru Jun, Casa del Prado

SAN MIGUEL BRANCH**AMERICAN BEGONIA SOCIETY**

Pres: Mrs. Toni Baker 582-7516
6475 50th Street, San Diego, CA 92120

***SOGETSU SCHOOL OF IKEBANA**

Pres: Mrs. Leroy Lahey 429-6198
2829 Flax Drive, San Diego, CA 92154

SOUTHWEST HEMEROCALLIS SOCIETY

Pres: Paul Strauss 453-1998
7887 Revelle Dr., La Jolla, CA 92037
1st Sat., Feb., Apr., Jun., Sep., Nov.
10 a.m. Quail Gardens Meeting Room
Quail Gardens Rd., Encinitas

SOUTHWEST JUDGES COUNCIL

Pres: Mrs. David W. Hoke 436-9462
335 Avenida de las Rosas
Encinitas, CA 92024

1st Wed., Casa del Prado, 10:00 a.m.

SUN HARBOR BRANCH**NATIONAL FUCHSIA SOCIETY**

Pres: Barney Gonzales 222-4254
4103 Tenneyson St., San Diego, CA 92107
4th Wed. Recreation Hall, Holy Trinity
Church, 2083 Sunset Cliffs Blvd.,
Ocean Beach

THE VILLAGE GARDEN CLUB**OF LA JOLLA**

Pres: Mrs. Harley Cope 546-9047
8686 Cliffridge Avenue, La Jolla, CA 92037
4th Thurs. Sep thru May 1:00 p.m.
La Jolla United Methodist Church
6063 La Jolla Blvd., La Jolla

THE VISTA GARDEN CLUB

Pres: Mrs. James McConnell
1268 Waxwing Drive
Vista, CA 92083-3045
1st Fri., at 222 Jefferson St. Vista
Senior Service Center, 12 noon

THE WATER LILY SOCIETY

Pres: Norman Bennett (301) 662-2230
c/o Charles B. Thomas, Secretary
P.O. Box 104
Buckystown, MD 21717-0104
Meeting

PROFESSIONAL AFFILIATES**ARTISTIC PRUNING**

Jim Stelluti 298-7641
1928 Madison Avenue
San Diego CA 92116

BLOOMERS

Saks Fifth Avenue Courtyard
P.O. Box 353
La Jolla, CA 92038

CALIFORNIA HORTICULTURAL

INSTITUTE (714) 492-8968
Post Office Box 457
San Clemente, CA 92672

CLASSIC GARDENS

Paul DeMartini 459-0316
P.O. Box 2711
La Jolla, CA 92038

DEVON HEDDING

3130 Browning St., San Diego, CA 92106
ELLIS FARMS RETAIL NURSERY/
FLORIST

P.O. Box 961
1325 Borrego Valley Road
Borrego Springs, CA 92004

LINDA A. FARRIER

(619) 436-7092
1435 Caudor Street
Leucadia, CA 92024

FLOWERS BY SUZE B

(619) 931-5867 / 276-8981
6851 Briarwood Drive
Carlsbad, CA 92009

GRIGSBY FAMILY LANDSCAPE

Jim and Kathleen Grigsby
461-7732
7964 High St., La Mesa, CA 92041

HORTICULTURIST, LECTURER,

AUTHOR
Bettie L. Furuta
(619) 723-8678
2055 Rice Canyon Rd.
Fallbrook, CA 92028

HOUSE OF BODE (916) 483-5977

Mr. and Mrs. William T. Bode
2800 Huntington Road
Sacramento, CA 95864

LAWSON VALLEY NURSERY

Clyde & Ann Wahl (619) 445-2934
3616 Rudnick Dr., Jamul, CA 92036

MASTER LANDSCAPE SERVICES, INC.

Robert Mayberry and Gary Rodriguez
3089C Clairemont Drive, Suite 296
San Diego, CA 92117 (619) 276-6016

MOORTEN BOTANICAL GARDEN

"DESERTLAND"
Patricia Moorten (619) 327-6555
1701 South Palm Canyon Drive
P.O. Box 851
Palm Springs, CA 92264

SEAWOOD LANDSCAPING

(619) 272-7603 / 270-0329
4827 Lamont Street
San Diego, CA 92109

STERLING TOURS

Cheryl Hedgpeth (619) 299-3010
2707 Congress St., Suite 1 H
San Diego, CA 92110

SUNSHINE GARDENING

Ken Fernandes (619) 224-1930
3021 McCall, San Diego, CA 92106

THE PLANT LADY

Shirley Marcoux 748-1849
13022 Carriage Road
Poway, CA 92064

CALIFORNIA GARDEN (USPS 084-020)
San Diego Floral Association, Inc.
Casa del Prado, Balboa Park
San Diego, CA 92101-1619, USA

SECOND CLASS POSTAGE PAID AT SAN DIEGO, CALIFORNIA

Oct 89 VI-1977 Family

1

Mr. & Mrs. W. Rathmann
240 Chula Vista Street
Chula Vista, CA 92010



ROSE
FESTIVAL
EASTER WEEK

700 KINDS OF ROSES

#1 — 5 GALLON

OLD-FASHIONED AND LANDSCAPE ROSES
GRANDIFLORA, TEAS, FLORIBUNDAS
POLYANTHAS
18", 24", & 36" TREES

SINCE 1967



OPEN DAILY
9 A.M.—5 P.M.

TROPIC WORLD, INC.

NURSERY and GARDENS

26437 N. CENTRE CITY PARKWAY
ESCONDIDO, CA 92026
(619) 746-6108

- ROSES — 600 varieties
- FRUIT TREES, NUTS, BERRIES — 500 varieties
- SUCCULENTS, CACTI — 2000 varieties
- MUCH MORE

